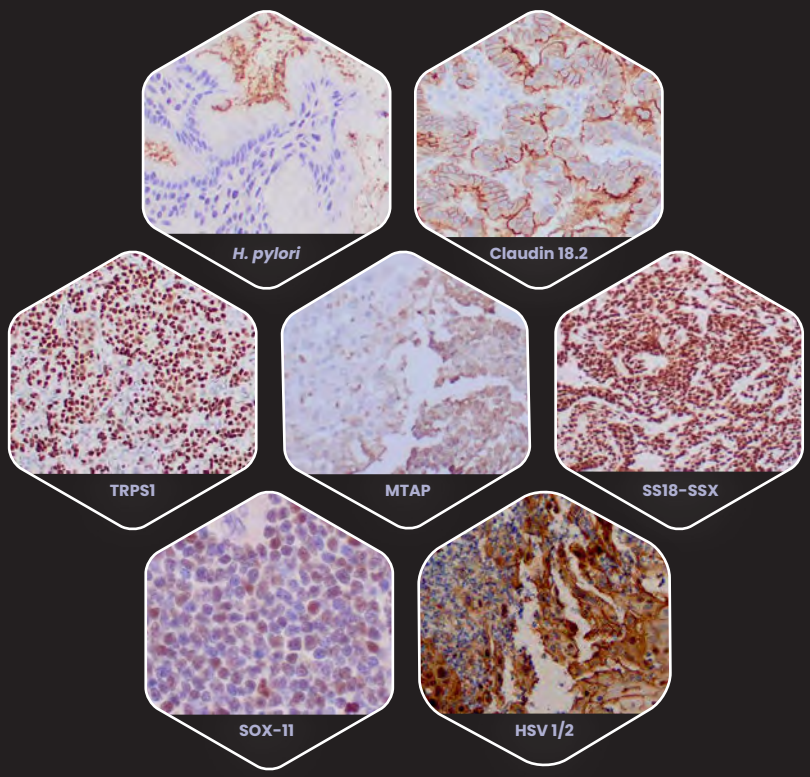
NEW PRODUCTS page 7

Precision IVD Antibodies for Anatomic Pathology 2025



ZETA Corporation

zeta-corp.com

Our Mission

Provide the highest-quality diagnostic IVD antibodies assisting diagnosis, targeted therapy, and differential diagnosis of human diseases.

ZETA Corporation

Target-validated Antibodies
for Anatomic Pathology
Product Catalog

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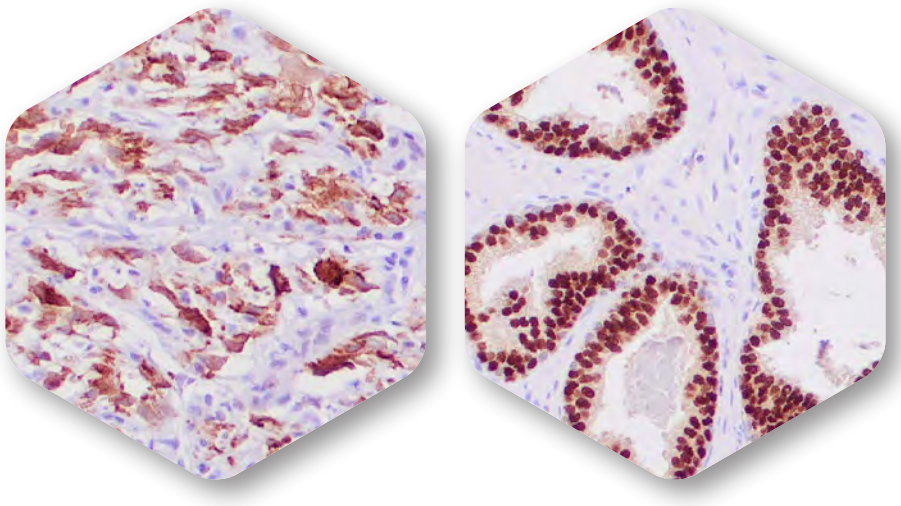

Welcome to ZETA

Zeta Corporation is an ISO 13485:2016 and FDA registered biomedical company that manufactures and distributes IVD antibodies for Pathology/IHC. We provide the highest quality of antibodies to help pathologists diagnose human tumors and diseases. Zeta antibodies are carefully curated to produce reproducible results on formalin-fixed, paraffin-embedded (FFPE) sections manually or using commercially available automated equipment. Zeta utilizes its collective knowledge of over 75 years to validate and standardize every antibody individually for immunohistochemistry (IHC) application.

Zeta designs and develops tumor-specific biomarkers using cutting-edge technology to uniquely select the immunogens for our famed RAbMono™ (Rabbit Monoclonal) and MonoMAb™ (Monospecific monoclonal) antibodies. Zeta's MonoMAb™ and RAbMono™ Antibodies are produced through hybridoma and recombinant technologies.

We are proud of our commitment to producing highly specific, target-validated, and characterized IVD primary biomarkers to aid pathologists in the differential diagnosis of various tumors.

We market the products directly in the US and distribute them to over 50 different countries globally through our trusted partners.

Zeta offers CE-IVD labeled products with European regulatory compliance and encourages distributors to register the products in the individual territories as needed. We also aid the clients and distributors with quality approvals through third-party QC bodies like the NordiQC, based in Denmark.

Ordering Information

To place an order from North America:

Phone US: (626) 355-2053
Fax US: (626) 836-9149
By mail: P.O. Box 282
Sierra Madre, CA
91025-0285 USA
Email: orders@zeta-corp.com

Customers outside North America, please contact your local distributor.

See inside back cover for listings by country.

Requirements:

All orders should include the following:

- billing address and shipping address
- purchase order number
- callers name and telephone number
- catalog # and description of each product
- quantity and package size of each product
- name, phone number and email of the principal user
- name, phone number, email and fax number of the customs broker and/or freight forwarder for US/Canadian orders, if required

Written confirmation of a telephone order is NOT required. If written confirmation of a telephone order is sent, however, it must be clearly marked "Confirming Order – Do Not Duplicate".

Prices:

For US and Canada, please call or email us for product pricing. Customers outside North America should contact their local distributor for pricing information.

Payment:

Company checks, wire transfers and credit cards are accepted.

Terms:

Credit terms are net 30 days. Shipping terms are FOB shipping point, pre-paid and added to the invoice.

Shipping:

All orders received by 2PM PT are routinely shipped the same day and delivered the following business day, except Friday, and deliver the following business day for most US and Canadian customers.

Returns:

No product will be accepted for return, credit or replacement without prior authorization obtainable from our customer service department. Return products are subject to a re-assay and stocking charge equal to 25% of the order value. No product may be returned for credit after 20 days from receipt of order.

Condition of Sale:

Nothing disclosed in this catalog is to be construed as a recommendation to use any of the described products in violation of any patents issued or pending. Zeta is not responsible for patent infringement which may occur with the use of these products. The product descriptions in this catalog are accurate to the best of our knowledge. Since applications of Zeta products are subjected to variable influences beyond our control, the products are offered without performance warranty, expressed or implied. Zeta will not be liable for any loss, damage, or expense which might result from the sale, storage, handling, use, or in ability to use these products. Zeta guarantees that the products described in this catalog are consistent in all respects with the written descriptions contained herein and, furthermore, are consistent with the descriptions on certificates of analysis which are furnished with each product order. Changes and physical criteria of any product will be reflected in the current certificate of analysis for that product. If such changes are made, the certificate of analysis description will supersede that contained in this catalog. If any Zeta product fails to meet the physical criteria ascribed to it on its accompanying certificate of analysis, Zeta, after validating the deficiency, will, at the option of the customer, either replace the deficient product in kind or will issue a dollar credit equivalent to the purchase price of the deficient product.

Technical Support

To exceed your information needs, Zeta has dedicated Ph.D. technical service staff to offer solutions, explain additional product details, and offer specific product recommendations for immunohistochemistry (IHC on FFPE sections) application. To help our customers with troubleshooting assistance, will utilize all scientific resources to solve your inquiry. Our goal is to always provide timely same-day service to all inquiries. Please contact our technical service scientists by phone, fax or email.

Phone US: (626) 355-2053 Fax US: (626) 836-9149 Email: info@zeta-corp.com

Quality Assurance

Zeta provides the highest quality antibodies to help pathologists diagnose human diseases. We leverage over 75 years of our collective knowledge to validate and standardize every antibody offered.

All Zeta Corporation antibodies are rigorously evaluated and validated for immunhistochemistry on formalin-fixed, paraffin embedded (FFPE) tissue sections to produce trusted and reproducible results - using manual methods or commercially available automated equipment.

We are an ISO 13485:2016-certified biomedical company, and our antibody clones are scientifically selected to fit the need of clinical immunohistochemical laboratories. Our primary antibodies are manufactured in a FDA-registered and GMP facility and purified by affinity chromatography t0 >99% purity.

bsi.

By Royal Charter

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 13485:2016

This is to certify that:

Zeta Corporation
605 E Huntington Drive #204
Monrovia
California
91016
USA

Holds Certificate Number: FM 688378

and operates a Quality Management System which complies with the requirements of ISO 13485:2016 for the following scope:

Design & development, manufacture and sales of diagnostic antibodies for paraffin immunohistochemistry.

For and on behalf of BSI:

Graeme Tunbridge, Senior Vice President Global Regulatory & Quality

Original Registration Date: 2018-07-04
Latest Revision Date: 2024-06-06

Effective Date: 2024-07-04
Expiry Date: 2027-07-03

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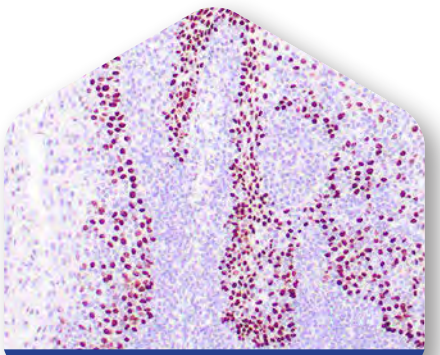
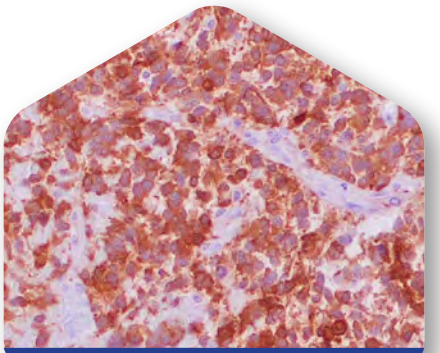
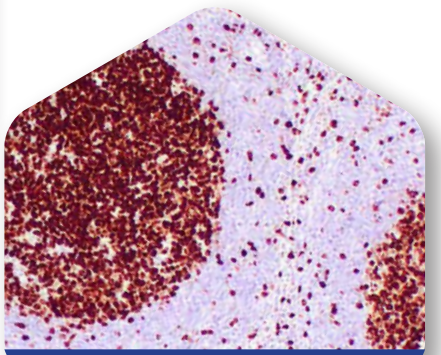
...making excellence a habit.



ISO 13485:2016



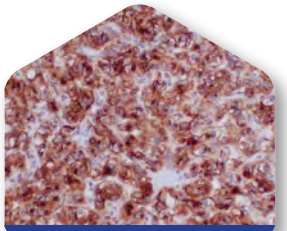
CE/IVD



GMP/FDA Registered

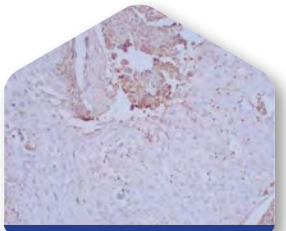
NEW ANTIBODIES

General & Epithelial Markers



CD70

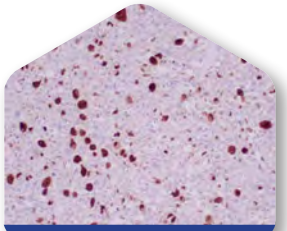
p.37



MTAP

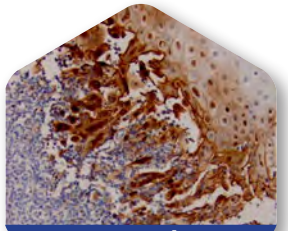
p.78

Infectious Markers



CMV

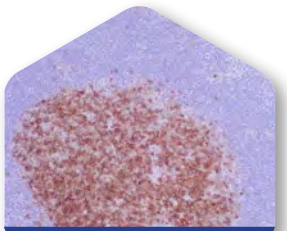
p.43



HSV I/II Cocktail

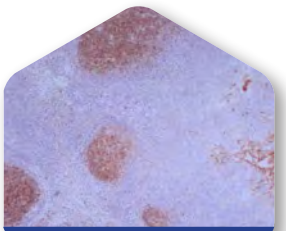
p.67

Hematopathology



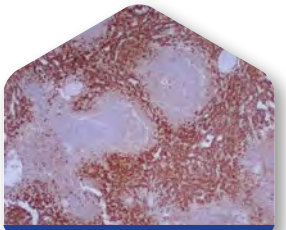
CD10

p.27



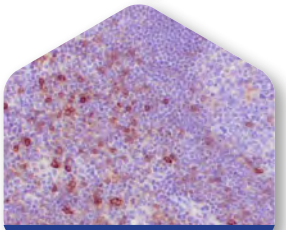
CD10

p.27



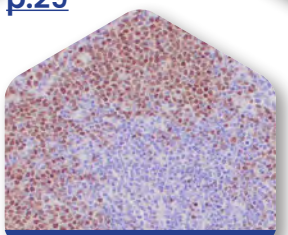
CD16

p.29



CD25

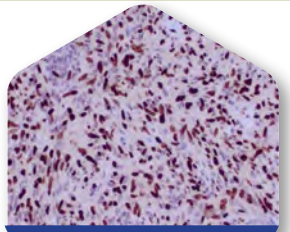
p.31



SOX-11

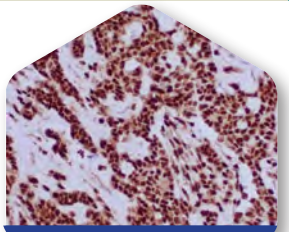
p.104

Soft Tissue Pathology



H3.3G34W

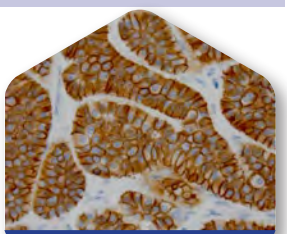
p.63



SS18-SSX

p.104

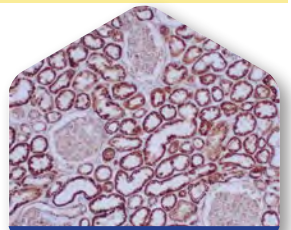
GI Pathology



Cadherin 17

p.22

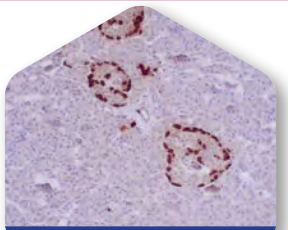
Urinary Pathology



Fumarate Hydratase

p.58

Neuropathology/Endocrine



Glucagon

p.60

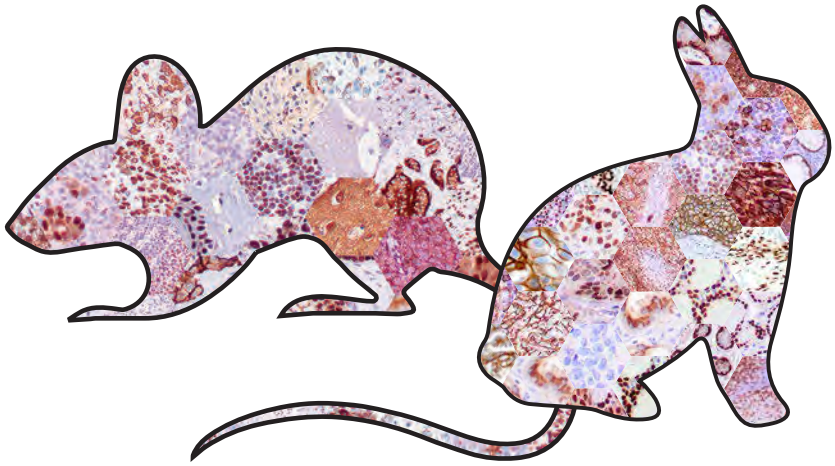
RAbMono™ Rabbit Monoclonal Antibodies

Superior specificity, low background and high affinity.

RAbMono rabbit monclonals designed and developed at Zeta are uniquely produced and target-validated for IHC on FFPE tissue sections. In contrast to typical mouse monoclonal technology, Zeta has achieved a unique and effective rabbit monoclonal production platform based on our unmatched expertise in the field.

Generally, Rabbit Monoclonals are characterized by 10 to 100 times higher affinity than Mouse Monoclonals. The rabbit's immune system is better equipped to generate a response to smaller antigens that are not detected in mice. As a result, Rabbit Monoclonals are becoming increasingly popular in immunohistochemical detection of tumor markers in humans.

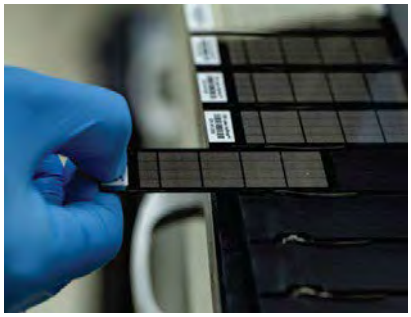
MonoMAb™ Mouse and Rabbit Monospecific Monoclonal Antibodies



Zeta's monospecific monoclonal antibodies are produced by traditional hybridoma technologies. Clones are initially assessed by ELISA and gel electrophoresis, then subsequently specifity-tested by immunohistochemsitry on FFPE sections.

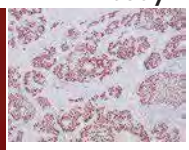
Quality assurance taken to the next level
Only the clones that excel on FFPE sections are selected for HuProt™ high-throughput human proteome microarray analysis. The antibodies are incubated with glass slides containing over 21,000 immobilized full-length human proteins. The microarrays are scanned, protein binding analyzed with GenePix Pro Image Analysis Software and cross-reactivity determined.

HuProt™ Proteome Microarray



Non-specific Antibody

Monospecific IVD Antibody



Which antibody would you trust in your clinical immunohistochemical laboratory?

Zeta Corporation's current portfolio: 400+ antibodies listed for Anatomic Pathology

- Breast/Gynocological Pathology
- Hemopathology
- Soft Tissue Pathology
- Dermatopathology
- Infectious Markers
- Transplantation Pathology
- General & Epithelial Markers
- Lung/Mediastinum Pathology
- Urinary Pathology
- GI Pathology
- Neuropathology/ Endocrine

Breast/Gynocological Pathology	Clone	Page
BCA-225	Cu-18	18
BRCA-1	ZR455	20
BRG1/SMARCA4	ZR390	20
CA 125/ MUC16	ZM53	21
Cytokeratin 14	LL002	48
Cytokeratin 14	ZM372	49
E-Cadherin	ZM63	53
E-cadherin	ZR375	53
ER	ZM319	55
ER	ZR147	55
GATA-3	L50-823	59
GATA3	ZR358	59
GCDFP-15	ZM23	60
HCG	ZR362	64
Her-2/neu	ZR5	65
Her-2/neu	ZR218	65
Ki-67	ZM67	71
Ki-67	MIB-1	71
Ki-67	ZR433	72
Mammaglobin	304-1A5	73
Mammaglobin	ZR363	74
Mammaglobin	31-A5	74
Mammaglobin Cocktail	304-1A5 & 31-A5	74
P120	ZR316	91
p16INK4a	G175-405	87
p16INK4a	JC2	88
p16INK4a	ZR407	88
p57Kip2	KP10	90
p57Kip2	ZR230	90
PLAP	ZM161	96
PLAP	ZR441	96
Podoplanin	ZR442	96
Podoplanin	D2-40	97
PR	ZR4	97
PR	ZR290	97
Stathmin	ZR398	104
TRPS1	ZR382	110
WT-1	6F-H2	113

Dermatopathology	Cat#	Page
BRAF	ZR6	20
Desmoglein-3	ZR128	51
Factor XIIIa	ZM84	57
Langerin	ZR170	72
Melan-A (MART-1)	A103	75
Melanosome	HMB-45	75
MiTF (Microphthalmia)	C5/D5	76
PRAME	ZR383	98
S-100	4C4.9	101
S-100B	ZR379	101
SOX-10	ZM10	103
SOX-10	ZR275	103
SOX-2	ZM57	103
Tyrosinase	T311	111

General & Epithelial Markers	Clone	Page
CD11c	ZM103	28
CD70 *NEW*	ZR469	37
Cyclin-E	ZM121	45
Cytokeratin	CAM 5.2	45
Cytokeratin 17	E3	49
Cytokeratin 18	DC10	49
Cytokeratin 18	ZM205	49
Cytokeratin 19	ZR143	50
Cytokeratin 19	BA17	50
Cytokeratin 5	ZR280	46
Cytokeratin 5	ZM186	46
Cytokeratin 5/6	D5/16B4	47
Cytokeratin 5/6	ZR412	47
Cytokeratin 8	ZM123	48
Cytokeratin 8/18	B22.1 & B23.1	48
Cytokeratin 8/18	ZM125	48
Cytokeratin, Pan	AE1/AE3	46
Cytokeratin, Pan	OSCAR	46
EMA	E29	54
EMA	ZR133	54
EP-CAM	ZM131	54
EP-CAM	Ber-EP4	54
EP-CAM/ ESA	MOC-31	55
EP-CAM/ ESA	ZR307	55
EZH2	ZR150	56
Galectin-3	ZR430	58
Galectin-3	ZM182	59
MTAP *NEW*	ZR467	78
MUC-1	ZM32	78
MUC-1	ZR435	78
MUC-4	ZR201	79

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General & Epithelial Markers	Clone	Page
p21	ZR288	88
p27Kip1	SX53G8	88
p53	DO-7	89
p53	ZR153	89
PCNA	ZR378	93
PD-1 (PDCD1)	ZM357	93
PD-1 (PDCD1)	ZR408	93
PD-L1	ZR3	93
PHH3	ZR285	95
RRM1	ZR114	100
S100P	ZR115	101
Thymidylate Synthase (TS)	TS106	107
Thymidylate Synthase (TS)	ZR245	107
Topoisomerase II alpha	ZR94	109
TROP2	ZR388	110
VEGF	ZR389	112

GI Pathology	Clone	Page
AFP	C3	15
Arginase-1	ZR368	17
c-myc	ZR355	43
CA19-9	121SLE	22
Cadherin 17 *NEW*	ZR418	22
CD117	ZM321	39
CD117	ZR424	39
CDX2	ZR215	41
CEA-M	CEA31	42
CEA-P	poly	42
CEACAM5	ZR370	41
Claudin 18.2	ZR451	43
CPA1	ZR450	44
Cytokeratin 20	ZM42	50
Cytokeratin 20	ZR429	50
Cytokeratin 20	Ks20.8	51
DOG-1	DOG1.1	52
DOG-1	ZR146	52
DPC4 (SMAD4)	B-8	52
DPC4 (SMAD4)	ZR392	52
Glutamine synthetase	ZM377	61
Glutamine synthetase	ZR431	61
Glypican 3	ZM138	62
Glypican 3	1G12	62
Glypican 3	ZR405	62
HepPar-1	OCH1E5	65
HSP70	ZR152	66
IMP-3	EP286	69
MLH-1	G168-728	76
MLH1	ZR347	77
MSH-6	ZM99	77
MSH2	ZR260	77
MSH6	ZR342	77
MUC-2	Ccp58	78
MUC-2	ZR175	79
MUC-5AC	ZM148	79
MUC-5AC	ZR19	79
PMS2	ZR317	96
SATB2	ZR167	102
Villin	ZR155	112

Hematopathology	Clone	Page
Annexin A1	ZM211	17
BCL-2	124	18
BCL-2	ZR130	18
BCL-6	ZM22	19
BCL-6	ZR380	19
BOB1	ZM74	19
CD10	ZR329	27
CD10 *NEW*	ZR468	27
CD10 *NEW*	55C6	27
CD103	ZR404	38
CD123	ZM80	39
CD123	ZR425	40
CD13	ZM287	28
CD138	ZR251	40
CD14	ZM104	28
CD15	ZR417	28
CD15	MMA	29
CD16 *NEW*	ZR457	29
CD163	ZM29	40
CD163	ZR426	40
CD19	ZM179	29
CD19	ZR212	29
CD1a	O10	24
CD2	ZR100	24
CD20	L26	30
CD20	ZR243	30
CD205	ZM360	41
CD21	ZM75	30
CD21	ZR419	30
CD22	ZM183	31
CD23	ZM209	31
CD23	ZR225	31
CD25 *NEW*	ZM466	31
CD27	ZR402	32
CD3	ZM45	24
CD3	ZR414	25
CD30	Ber-H2	32
CD30	ZR248	32
CD33	PWS44	33
CD35	ZR58	33
CD38	ZR351	34
CD4	ZM180	25
CD4	ZR110	25
CD43	DF-T1	34
CD43	ZR403	34
CD44	ZR184	34
CD45 (LCA)	ZR361	35
CD45RA	ZR118	35
CD45RB (LCA)	2B11+PD7/26	35
CD5	ZM61	25
CD5	ZR228	26
CD61	ZM33	36
CD68	KP1	36
CD68	ZR302	37
CD7	ZM213	26
CD7	ZR416	26

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Hematopathology	Clone	Page
CD71	ZM136	37
CD71	ZR422	37
CD79a	JCB117	38
CD79a	ZR237	38
CD8	ZM54	26
CD8	ZR286	27
CTLA-4	ZR452	44
Cyclin D1	ZR197	44
Cyclin D1	ZM178	45
Fascin	ZM192	57
FOXL2	ZR399	57
FoxP1	ZR333	58
Granzyme B	ZR432	62
Granzyme B	ZM66	63
IgA	ZR291	67
IgD	ZR156	68
IgG	ZR247	68
IgG4	ZM56	68
IgG4	ZR299	68
IgM	ZR249	69
Kappa	ZM81	71
Lambda	LcN-2	72
LEF1	ZR336	72
LMO-2	ZR87	73
Lysozyme	ZM120	73
MUM1	ZR411	80
Myeloperoxidase	ZM352	81
Nucleophosmin (NPM1)	ZM82	86
OCT-2	ZM90	86
OCT-2	ZR227	86
PAX-5	ZM26	92
PAX-5	ZR268	92
Perforin	ZM159	94
Perforin	ZR270	94
Sox11 ***NEW***	ZR462	103
TCL1	ZM92	106
TdT	ZM51	106
TdT	ZR446	106
TIA-1	2G9A10F5	108
TIA-1	ZR284	108
TRAcP	ZM174	109
TRAcP	ZR234	109
Tryptase	ZM96	110
ZAP-70	ZM97	113
ZAP-70	ZR410	113

Infectious Markers	Clone	Page
Adenovirus	20/11 & 2/6	14
CMV ***NEW***	ZR456	43
EBV-LMP	CS1-4	53
H. Pylori	Poly	63
HBcAg	Poly	64
HBsAg	ZR393	64
HHV-8	LN53	65
HHV-8	ZR106	66
HPV	CAMVR-1 & C1P5	66

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Infectious Markers	Clone	Page
HSV I/II Cocktail ***NEW***	ZR471 Cocktail	67
HSV II	0192	66
HSV1	10A3	67
Toxoplasma gondii	Poly	109
Treponema pallidum	Poly	110

Lung/Mediastinum Pathology	Clone	Page
ALK	ZR305	15
BAP1	ZR454	18
Calretinin	ZM85	23
Calretinin	ZR415	24
EGFR	ZR16	53
GLUT-1	ZM137	61
GLUT-1	ZR308	61
HBME-1	HBME-1	64
Mesothelin	ZM25	75
Napsin A	ZR206	82
Napsin-A	ZM11	83
P40	ZR303	89
p40	ZR8	89
Podoplanin	ZM31	97
ROS1	ZR400	100
Surfactant	ZM124	105
TTF-1	8G7G3/1	111
TTF-1/NKX2.1	ZR176	111

Neuropathology/Endocrine	Clone	Page
ACTH	ZM98	14
ATRX	ZR244	17
Calcitonin	ZM301	22
CD56	ZR421	35
CD56	123C3.D5	36
CD57	NK-1	36
Chromogranin A	ZM12	42
Chromogranin A	ZR427	42
FSH	ZR246	58
Gastrin	ZM359	59
GFAP	GA-5	60
GFAP	ZR356	60
Glucagon ***NEW***	ZR470	60
Growth Hormone	ZM140	63
IDH1	ZR7	67
Inhibin-α	R1	69
Inhibin-α	ZM113	69
INSM1	A8	70
INSM1	ZR395	70
Insulin	ZM83a & ZM83b	71
LH	ZR173	73
MGMT	ZM314	76
MGMT	ZR434	76
Myelin Basic Protein (MBP)	ZM202	80
Myelin Basic Protein (MBP)	ZR109	81
NeuN	A60	83
NeuN	ZR386	83
Neurofilament	2F11	83
Neurofilament	ZR216	84

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Neuropathology/Endocrine	Clone	Page
NGFR	ZM55	84
NSE	ZM24	85
NSE	ZR406	85
NUT	ZR453	86
Olig2	ZR340	87
Parathyroid hormone (PTH)	ZM207	91
PGP9.5	ZM160	94
PGP9.5	ZR401	94
PHOX2B	ZR292	95
PIT-1/POU1F1	ZR440	95
PIT-1/POU1F1	ZM385	95
Prolactin	ZM203	98
Somatostatin Receptor Type 2	ZR233	102
SOX-9	ZM171	104
Steroidogenic Factor-1 (SF-1)	N1665	105
Steroidogenic Factor-1 (SF-1)	ZR397	105
Synaptophysin	ZM208	105
Synaptophysin	ZR445	106
Thyroglobulin	2H11+6E1	108
TSH	ZM294	111
Ubiquitin	ZM191	112

Soft Tissue Pathology	Clone	Page
Actin, Muscle Specific (MSA)	HHF35	14
Actin, Smooth Muscle (SMA)	1A4	14
ALDH1A1	ZM71	15
Beta-Catenin	ZM13	19
Brachyury	ZR391	20
Caldesmon	ZM79	22
Caldesmon	ZR413	23
Calponin-1	ZM21	23
Calponin-1	ZR297	23
CD31	JC70A	32
CD31	ZR274	33
CD34	QBEnd-10	33
CD99	ZM139	38
CD99	ZR423	39
CDK4	ZR394	41
Collagen IV	ZM177	43
Collagen IV	ZR108	43
Desmin	ZR240	51
Desmin	ZM34	51
ERG	ZR331	56
Factor VIII-R	ZM64	56
FLI-1	ZR217	57
H3.3G34W *NEW*	ZR459	63
INI-1	25	70
INI-1	ZR282	70
MDM2	SMP14	74
MDM2	ZR258	75
MUC-6	ZM89	80
MUC-6	ZR437	80
MyoD1	ZR262	81
Myogenin	F5D	81
Myogenin	ZM149	82
Myoglobin	ZR69	82

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Soft Tissue Pathology	Clone	Page
Myosin, SMHC	SMMS-1	82
NKX2.2	ZM14	84
NKX2.2	ZR438	84
Rb	ZR444	99
Rb	1F8	100
SS18-SSX *NEW*	ZR463	104
STAT6	ZR289	104
TLE1	ZM93	108
Vimentin	ZR381	113

Transplantation Pathology	Clone	Page
C3d	ZM369	21
C4d	ZM78	21

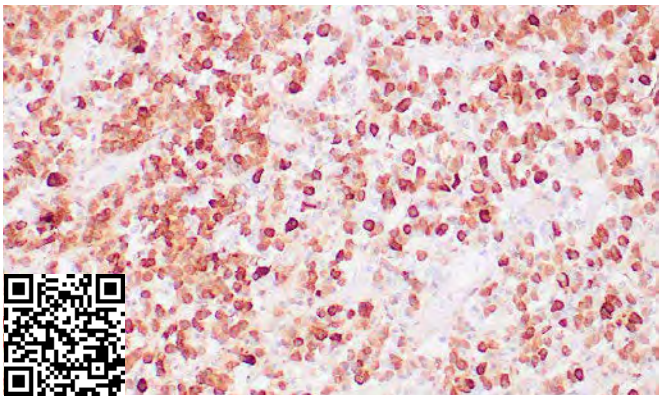
Urinary Pathology	Clone	Page
AMACR	13H4	15
AMACR + p63	13H4 + 4A4	16
AMACR + p63	13H4 + ZM70	16
AMACR + p63 + HMW CK Cocktail	13H4 + 4A4 + 34βE12	16
AMACR + p63 + HMW CK Cocktail	13H4 + ZM70 + 34βE12	16
Androgen Receptor (AR)	ZR334	17
CA IX	ZR367	21
Cytokeratin 7	OV-TL-12/30	47
Cytokeratin 7	ZR428	47
Cytokeratin, HMW	34βE12	45
Erythropoietin	ZM135	56
Fumarate Hydratase *NEW*	ZR458	58
NKX3.1	ZM95	85
NKX3.1	ZR222	85
OCT-4	C-10	87
OCT-4	ZR364	87
p63	ZM70	90
p63	ZR439	90
p63	4A4	91
PAX-2	ZR224	91
PAX-8	ZM28	92
PAX-8	ZR1	92
Prostein (P501S)	ZR9	98
PSA	ZR232	98
PSAP	ZM162	99
PSAP	ZR443	99
PTEN	ZR235	99
RCC	66.4.C2	100
SALL4	ZR276	101
SDHB	ZR339	102
Smoothelin	ZR169	102
TFE3	ZR365	107
Thrombomodulin/ CD141	ZM105	107
Uroplakin	ZM204	112
Uroplakin	ZM204	111

ACTH (clone ZM98) IVD

This MAb is specific to CLIP (aa 25-39 of ACTH); does not react with Synacthen (aa 1-24 of ACTH). Anti-ACTH is a useful marker in classification of pituitary tumors and the study of pituitary disease. It reacts with ACTH-producing cells (corticotrophs). It also may react with other tumors (e.g. some small cell carcinomas of the lung) causing paraneoplastic syndromes by secreting ACTH. (more)

Species: Mouse Monoclonal **Cat#:** Z2408

IHC: Human pituitary stained with ZM98

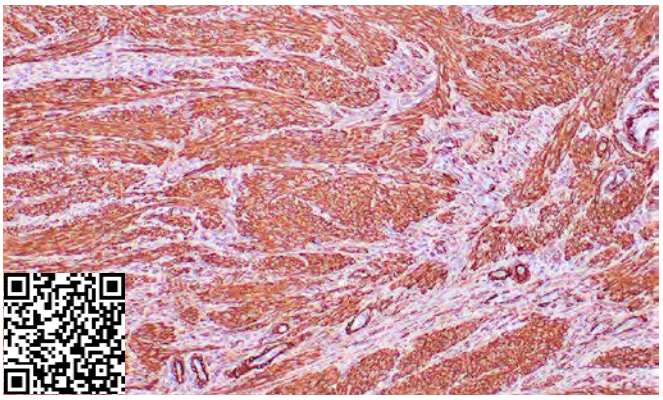


Actin, Smooth Muscle (clone 1A4) IVD

Anti-SMA stains smooth muscle cells in vessel walls, gut wall, and myometrium. Myoepithelial cells in breast and salivary gland are also stained. This antibody reacts with tumors arising from smooth muscles and myoepithelial cells. Use Actin and/or Tubulin for monitoring total protein load on Western blots.

Species: Mouse Monoclonal **Cat#:** Z2066

IHC: Human uterus stained with anti-SMA antibody (1A4)

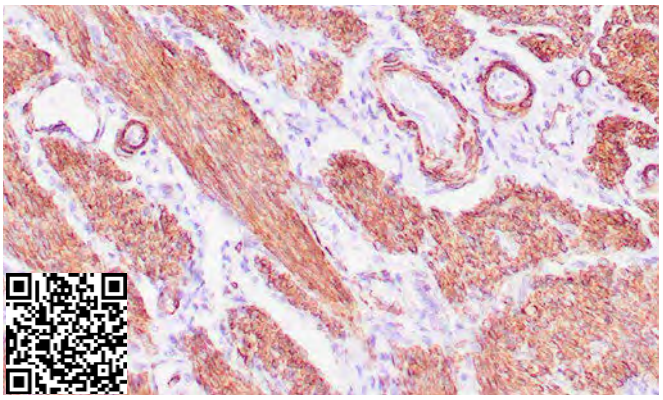


Actin, Muscle Specific (clone HHF35) IVD

Anti-MSA reacts with actin from tissue extracts of uterus, ileum, aorta, diaphragm, heart, and smooth muscle cells. It recognizes the alpha actin from skeletal, cardiac, and smooth muscle and the gamma actin from smooth muscle sources. It stains tumors of smooth muscle (leiomyomas and leiomyosarcomas) as well as skeletal muscle (rhabdomyomas and rhabdomyosarcomas).

Species: Mouse Monoclonal **Cat#:** Z2064

IHC: Human uterus stained with anti-MSA (HHF35)

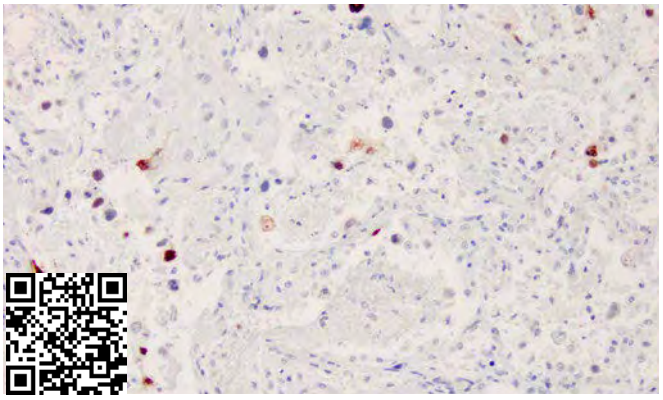


Adenovirus (clone 20/11 & 2/6) ASR/IVD

Adenovirus infection on morphology should be differentially diagnosed from other virus infections, especially CMV infection. Anti-adenovirus can assist in this differential diagnosis by showing a round or crescent-shaped nuclear inclusion, generally within the surface epithelium and is exclusively intra-nuclear in location. (more)

Species: Mouse Monoclonal **Cat#:** Z2566

IHC: Human lung stained with anti-Adenovirus (20/11&2/6)



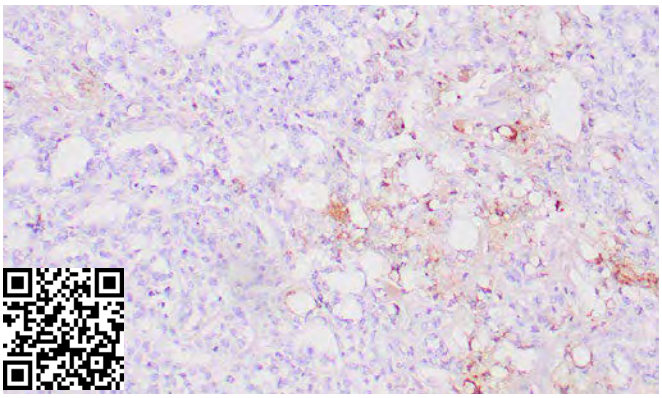
AFP (clone C3)

IVD

This MAb is highly specific to AFP and shows no cross-reaction with other oncofetal antigens or serum albumin. AFP is normally synthesized in the liver, intestinal tract, and yolk sac of the fetus. Antibody to AFP has been shown to be useful in detecting hepatocellular carcinomas (HCC) and germ cell neoplasms, especially yolk sac tumors.

Species: Mouse Monoclonal **Cat#:** Z2623

IHC: Human yolk sac tumor stained with anti-AFP



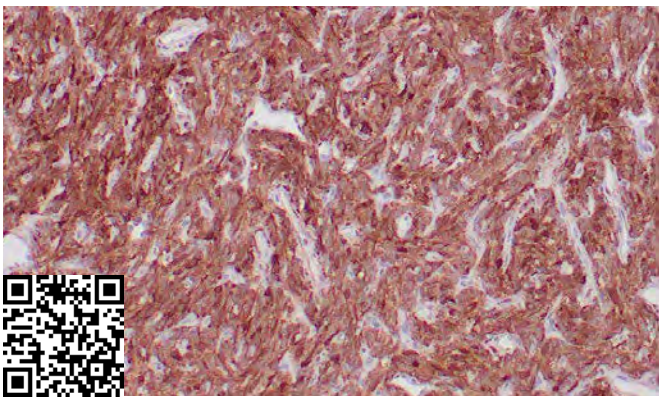
ALDH1A1 (clone ZM71)

IVD

ALDH1A1 is predominantly expressed in the epithelium of testis, brain, eye, liver, kidney, as well as neural and hematopoietic stem cells. Anti-ALDH1A1 can be combined with anti-CD34 to aid in the differentiation between SFT, HPC, meningioma, and synovial sarcoma. (more)

Species: Mouse Monoclonal **Cat#:** Z2387

IHC: Human solitary fibrous tumor stained with ZM71



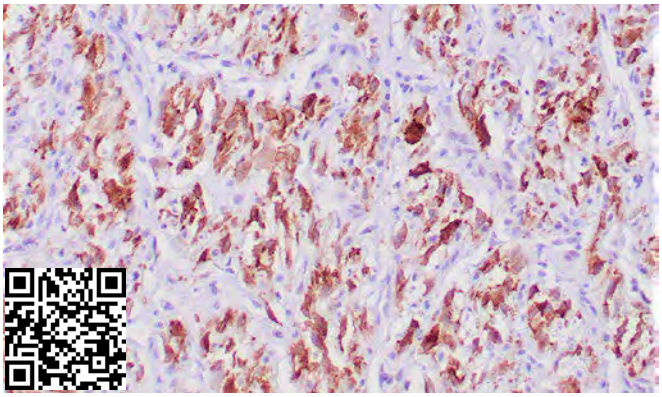
ALK (clone ZR305)

IVD

Anaplastic lymphoma kinase (ALK) is a receptor tyrosine kinase of the insulin receptor superfamily. ALK may be activated in cancer through multiple mechanisms. The most common mechanism is through formation of a fusion protein from chromosomal translocations, as in the case of anaplastic large cell lymphoma (ALCL) and inflammatory myo-fibroblastic tumors. (more)

Species: Rabbit Monoclonal **Cat#:** Z2534

IHC: Human lung adenocarcinoma stained with ZR305



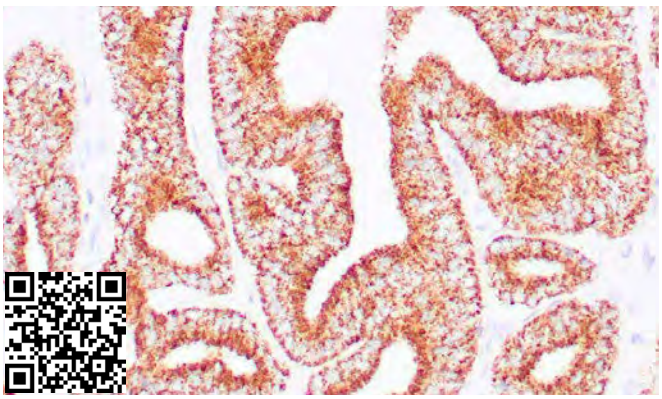
AMACR (clone 13H4)

IVD

High expression of AMACR (P504S) protein is found in prostatic adenocarcinoma but not in benign prostatic tissue by immunohistochemical staining in paraffin-embedded tissues. The expression of AMACR (P504S) is also detected in two premalignant lesions of the prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. (more)

Species: Rabbit Monoclonal **Cat#:** Z2001

IHC: Human prostate carcinoma stained anti-AMACR (13H4)

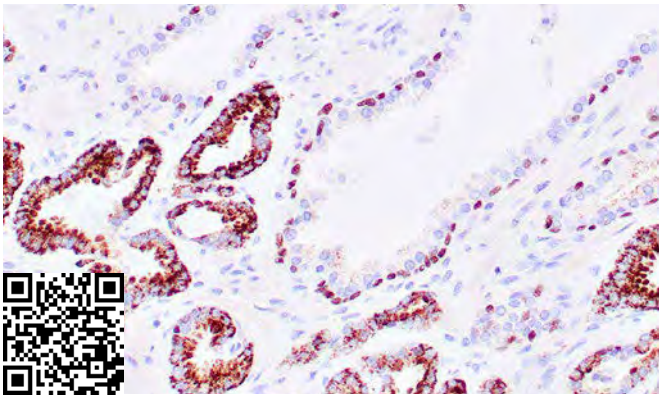


AMACR + p63 (clones 13H4+4A4) RUO

High expression of AMACR protein is found in prostate adenocarcinoma but not in benign prostate tissue by IHC in paraffin-embedded tissue. Expression of AMACR is also detected in prostate premalignant lesions, such as prostate intraepithelial neoplasia (PIN). The p63 protein, a homologue of the tumor-suppressor p53, is highly expressed in the basal or progenitor layer of many epithelial tissues. (more)

Species: Rabbit and Mouse Monoclonal **Cat#:** Z2005

IHC: Human prostate carcinoma stained anti-AMACR and anti-p63 antibodies (13H4/4A4)

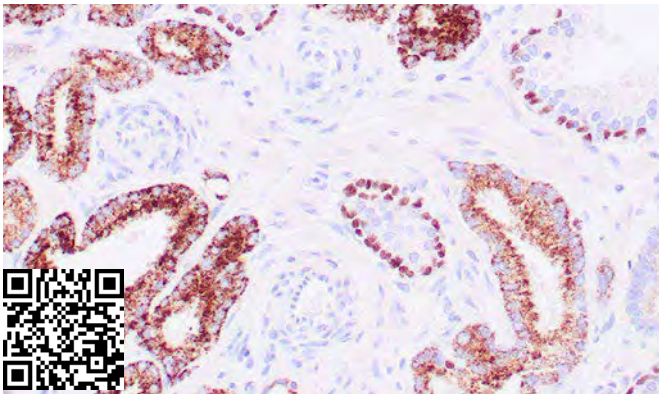


AMACR + p63 (clones 13H4+ZM70) IVD

High expression of AMACR protein is found in prostate adenocarcinoma but not in benign prostate tissue by IHC in paraffin-embedded tissue. Expression of AMACR is also detected in prostate premalignant lesions, such as prostate intraepithelial neoplasia (PIN). The p63 protein, a homologue of the tumor-suppressor p53, is highly expressed in the basal or progenitor layer of many epithelial tissues. (more)

Species: Rabbit and Mouse Monoclonal **Cat#:** Z2008

IHC: Human prostate carcinoma stained anti-AMACR and anti-p63 antibodies (13H4/ZM70)

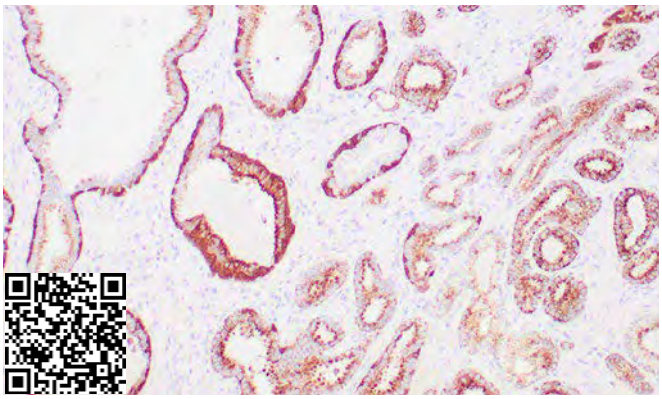


AMACR + p63 + HMW CK cocktail (clones 13H4+4A4+34βE12) RUO

High expression of AMACR protein is found in prostate adenocarcinoma but not in benign prostate tissue by IHC in paraffin-embedded tissue. Expression of AMACR is also detected in prostate premalignant lesions, such as prostate intraepithelial neoplasia (PIN). The p63 protein, a homologue of the tumor-suppressor p53, is highly expressed in the basal or progenitor layer of many epithelial tissues. (more)

Species: Rabbit and Mouse Monoclonal **Cat#:** Z2017

IHC: Human prostate carcinoma stained anti-AMACR, anti-p63 and anti-HMW CK 34βE12 antibodies

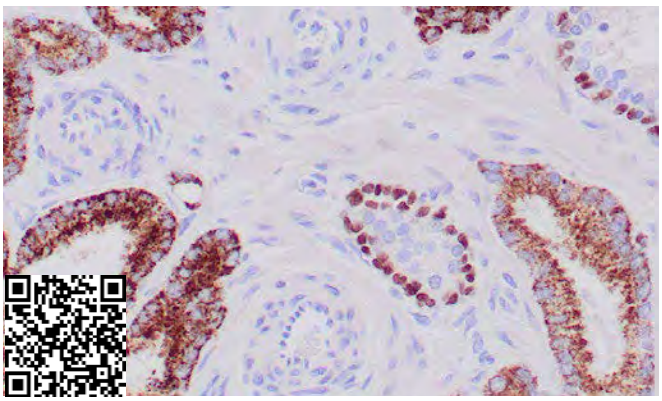


AMACR + p63 + HMW CK cocktail (clones 13H4+ZM70+34βE12) IVD

High expression of AMACR protein is found in prostate adenocarcinoma but not in benign prostate tissue by IHC in paraffin-embedded tissue. Expression of AMACR is also detected in prostate premalignant lesions, such as prostate intraepithelial neoplasia (PIN). The p63 protein, a homologue of the tumor-suppressor p53, is highly expressed in the basal or progenitor layer of many epithelial tissues. (more)

Species: Rabbit and Mouse Monoclonal **Cat#:** Z2015

IHC: Human prostate carcinoma stained anti-AMACR, anti-p63 and anti-HMW CK 34βE12 antibodies

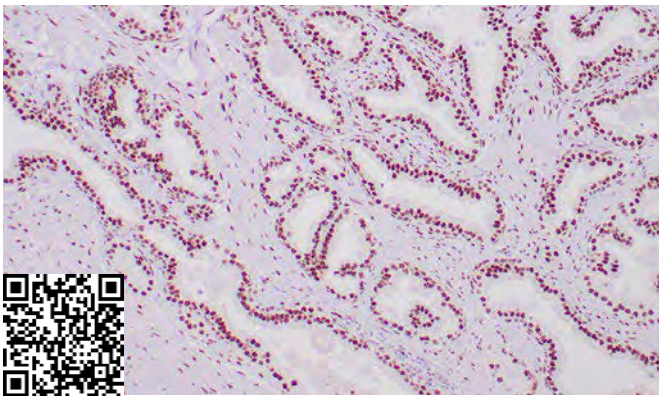


Androgen Receptor (clone ZR334) IVD

Androgen receptor (AR) has been reported in a diverse range of human tumors including osteosarcoma, and in prostatic carcinoma androgen receptor expression may be of clinical relevance. Androgen Receptor is recommended for the detection of specific antigens of interest in normal and neoplastic tissues, as an adjunct to conventional histopathology using non-immunologic histochemical stains. (more)

Species: Rabbit Monoclonal **Cat#:** Z2640

IHC: human prostate tissue stained with ZR334

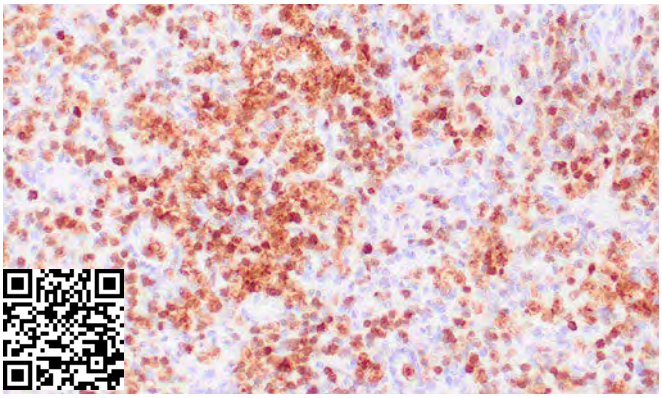


Annexin A1 (clone ZM211) IVD

Detection of Annexin A1 (ANXA1) provides a simple, highly sensitive and specific assay for diagnosing HCL. Annexin A1 has also been found to be protective against DNA damage induced by heat in breast cancer cells, suggesting it is involved in tumor suppressive and protective activities, and also is associated with treatment resistance.

Species: Monospecific Mouse Monoclonal **Cat:** Z2488

IHC: Human lymph node involved by hairy cell leukemia stained with ZM211

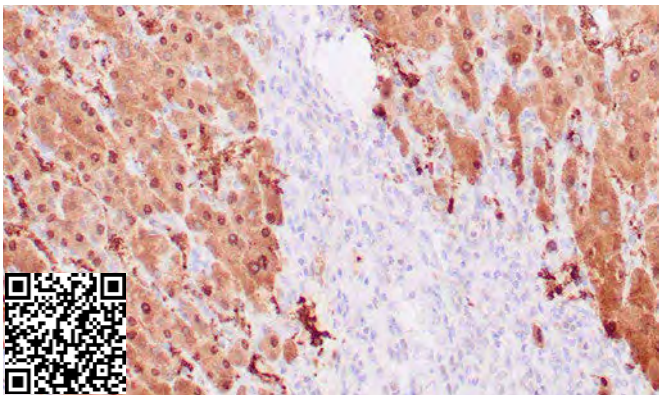


Arginase-1 (clone SP156) IVD

Arginase-1 is abundantly expressed in liver and it represents a sensitive and specific marker of benign and malignant hepatocytes that may be a useful diagnostic tool in routine surgical pathology practice. The sensitivities of arginase-1 in well, moderately, and poorly differentiated hepatocellular carcinomas are 100%, 96.2%, and 85.7%, respectively.

Species: Rabbit Monoclonal **Cat#:** Z2220

IHC: Human liver stained with SP156

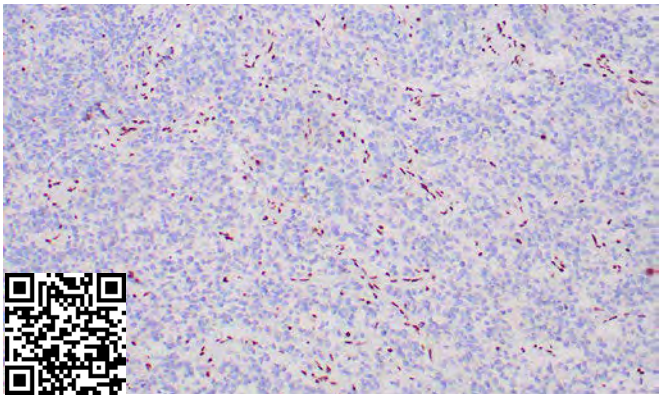


ATRX (clone ZR244) IVD

ATRX is a member of the Snf2 family of helicase/ATPases, which contribute to the remodeling of the nucleosome structure in an ATP-dependent manner and facilitate the initiation of transcription and replication. Mutations in the ATRX gene correlate with a high incidence of severe X-linked form of syndromal mental retardation associated with α thalassemia or ATRX syndrome. (more)

Species: Rabbit Monoclonal **Cat#:** Z2718

IHC: Human glioblastom stained with ZR244

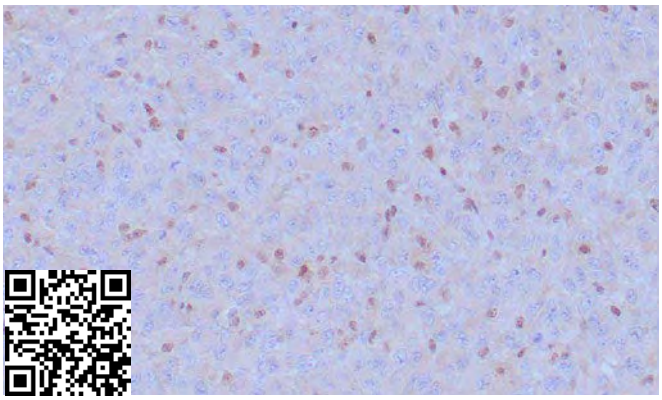


BAP1 (clone ZR454) IVD; RUO(EU)

BAP1 (BRCA1-Associated Protein 1) is a tumor suppressor that is believed to mediate its effects through chromatin modulation, transcriptional regulation, and possibly via the ubiquitin-proteasome system and the DNA damage response pathway. Germline mutations of BAP1 confer increased susceptibility for development of several tumors. BAP1 IHC is useful in differentiating malignant mesothelioma (nuclear negative) vs reactive mesothelial proliferatio (nuclear positive). (more)

Species: Rabbit Monoclonal **Cat#:** Z2813

IHC: Human malignant mesothelioma stained with ZR454

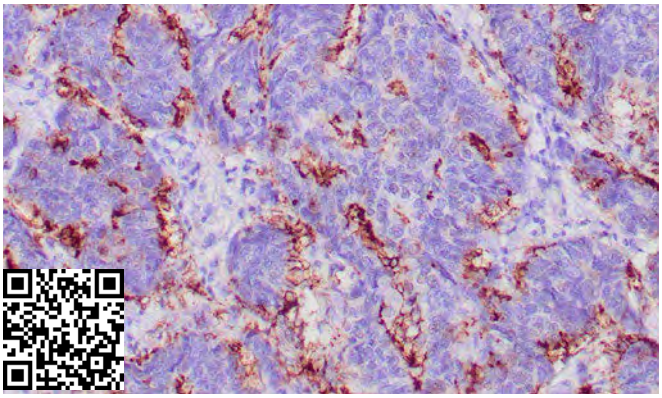


BCA-225 (clone Cu-18) IVD

Anti-BCA-225 recognizes a human breast carcinoma associated glycoprotein BCA-225 (220-225kD). Unlike other antibodies against breast carcinoma antigens, this antibody does not react with benign or malinant colonic, stomach, prostate, liver, pancreas, thyroid, or parotid tissues. Adenocarcinomas of the lung, ovary and endometrium also stain with this antibody.

Species: Mouse Monoclonal **Cat#:** Z2141

IHC: Human breast adenocarcinoma stained with Cu-18

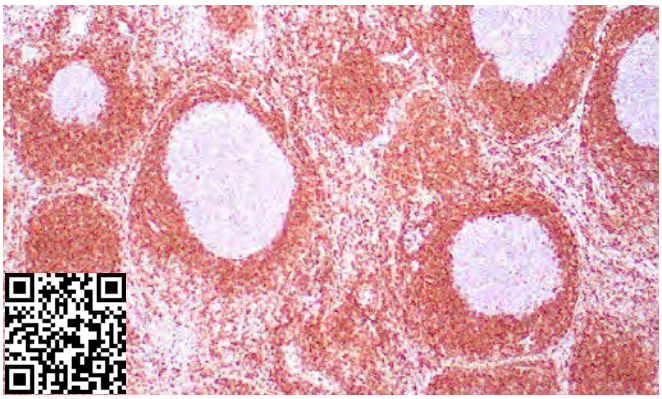


Bcl-2 (clone 124) IVD

Expression of bcl-2 oncoprotein inhibits the programmed cell death (apoptosis). In most follicular lymphomas, neoplastic germinal centers express high levels of Bcl-2 protein, whereas the normal or hyperplastic germinal centers are negative.

Species: Mouse Monoclonal **Cat#:** Z2022

IHC: Human reactive lymph node stained with anti-BCL-2 clone 124

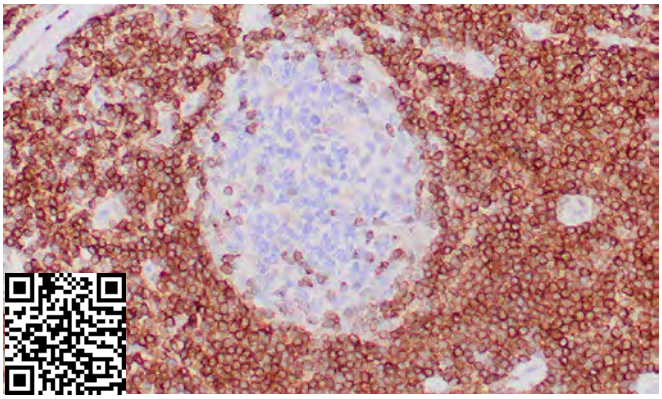


Bcl-2 (clone ZR130) IVD

This antibody is intended for in vitro diagnostic (IVD) use. Bcl-2 (clone ZR130) rabbit monoclonal primary antibody is intended for laboratory use in the detection of BCL-2 in formalin-fixed, paraffin-embedded tissue by immunohistochemical (IHC) staining. The staining results should be interpreted by qualified pathologists in conjunction with the patient's relevant clinical history.

Species: Rabbit Monoclonal **Cat#:** Z2682

IHC: Human tonsil stained with ZR130

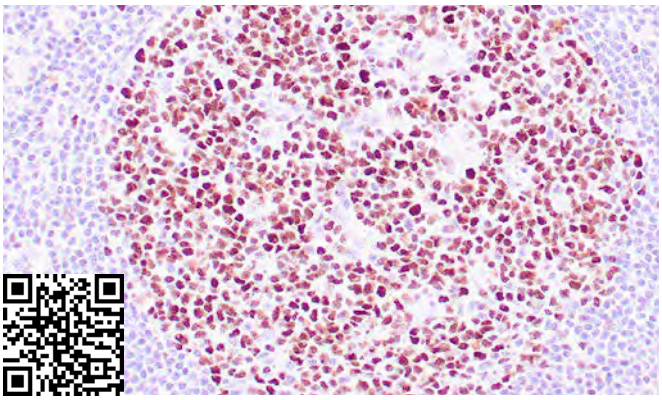


Bcl-6 (clone ZM22) IVD

Anti-Bcl-6 is helpful in a number of diagnostic settings: (1) In the differential diagnosis of small B-cell lymphoma. Follicular lymphoma will show bcl-6 (and CD10) positivity whereas other small B-cell lymphomas are usually negative.(2) Bcl-6 is an important prognostic marker in diffuse large B-cell lymphomas(DLBCL), where CD10, bcl-6 and MUM1/IRF4 are used to identify germinal center and activated B-cell phenotypes. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2343

IHC: Human reactive lymph node stained with ZM22

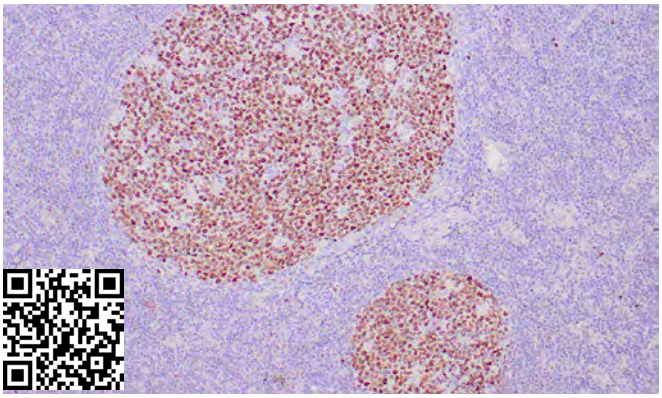


Bcl-6 (clone ZR380) IVD

Recognizes 95kDa Bcl-6. Anti-Bcl-6 is helpful in a number of diagnostic settings: (1) In the differential diagnosis of small B-cell lymphoma. Follicular lymphoma will show bcl-6 (and CD10) positivity whereas other small B-cell lymphomas are usually negative.(2) Bcl-6 is an important prognostic marker in diffuse large B-cell lymphomas(DLBCL), where CD10, bcl-6 and MUM1/IRF4 are used to identify germinal center and activated B-cell phenotypes.(3) Bcl-6 can be valuable in distinguishing... (more)

Species: Rabbit Monoclonal **Cat#:** Z2658

IHC: Human reactive lymph node stained with ZR380

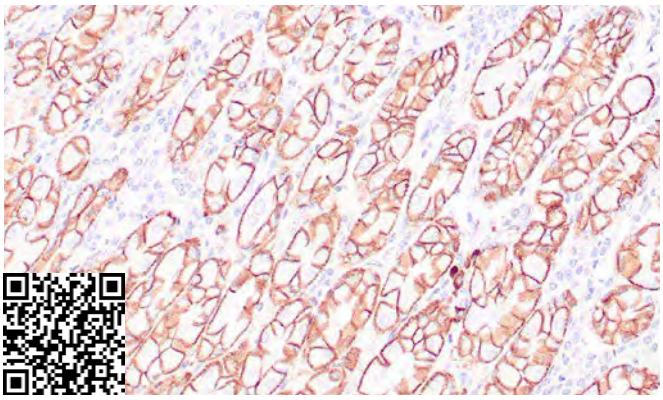


Beta-Catenin (clone ZM13) IVD

Mutations in the Beta-catenin gene result in loss of membranous staining and nuclear accumulation of this protein. Nuclear accumulation has been demonstrated in desmoid-type fibromatosis lesions of the breast and abdomen and therefore is useful in differentiating this lesion from other spindle cell lesions that may occur in these locations. Nuclear accumulation of Beta-catenin has also been demonstrated in colorectal carcinoma.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2355

IHC: Human colon adenocarcinoma stained with ZM13

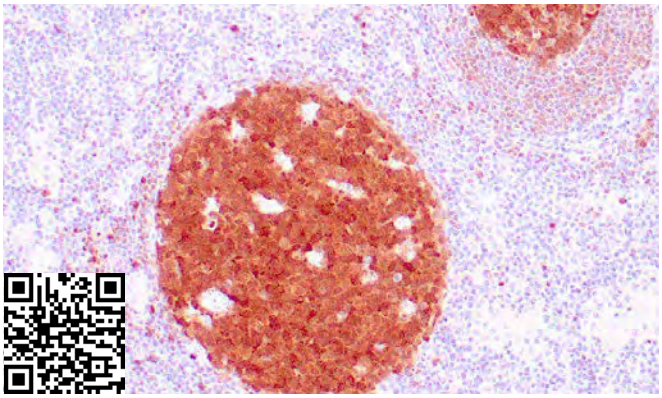


BOB1 (clone ZM74) IVD

LP cells in nodular lymphocyte predominant Hodgkin lymphoma, because they are germinal center-derived, are consistently immuno-positive for BOB1. Conversely, only some cases of classical Hodgkin lymphoma show BOB1 immuno-reactivity within the Hodgkin and Reed-Sternberg cells. Expression of BOB1 has been reported in follicular center cell lymphoma, diffuse large B-cell lymphoma and some cases of acute myeloid leukemia. (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2384

IHC: Human lymph node stained with ZM74

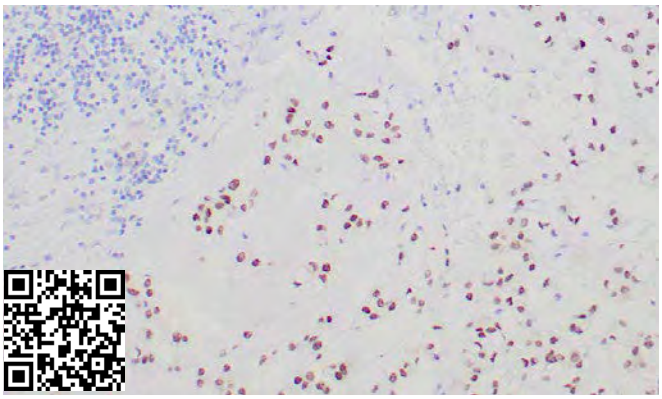


Brachyury (clone ZR391) IVD

The T-box gene family comprises members with a unique DNA binding domain. The best characterized T-box (Tbx) gene, brachyury or T, encodes a transcription factor that plays a vital role in early vertebrate development. Tbx genes are a family of developmental regulators with more than 20 members recently identified among invertebrates and vertebrates. Mutations in Tbx genes have been found to cause several human diseases. The understanding of functional mechanisms of Tbx... (more)

Species: Rabbit Monoclonal **Cat#:** Z2747

IHC: Human chordoma stained with ZR391

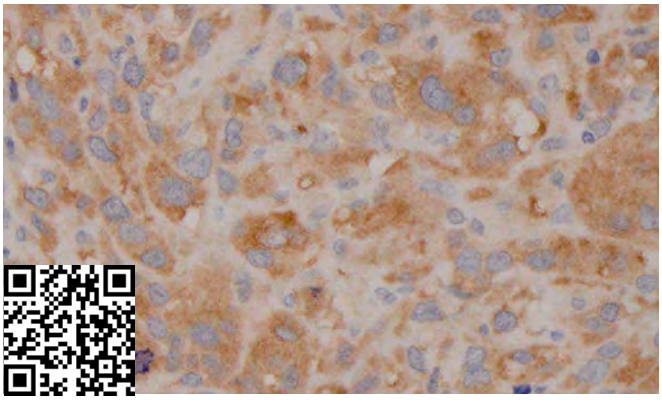


BRAF (V600E) (clone ZR6) IVD; RUO(EU)

The BRAF gene encodes a protein that is part of the RAS-RAF-MEK-ERK signaling pathway, which regulates cell division and proliferation. The V600E mutation in the BRAF gene leads to the production of a constitutively active BRAF protein, resulting in uncontrolled cell growth and division. Identifying the presence of this mutation is crucial for diagnosing and guiding the treatment of certain cancers. The BRAF (V600E) antibody is used in immunohistochemistry to detect... (more)

Species: Rabbit Monoclonal **Cat#:** Z2811

IHC: Human melanoma stained with ZR6

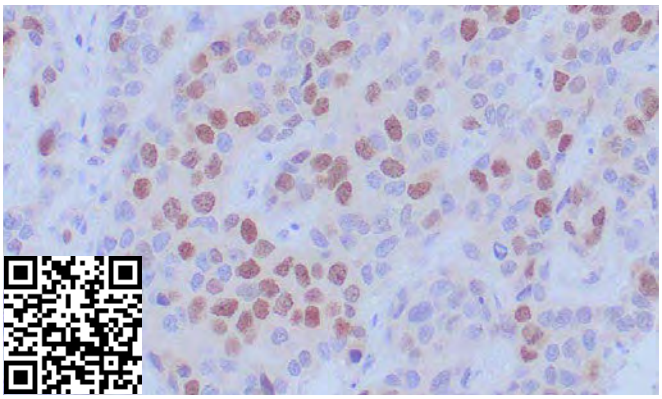


NEW BRCA-1 (clone ZR455) IVD; RUO(EU)

Mutations of BRCA1 genes have been linked to an increased risk of developing breast and ovarian cancers. Individuals with certain mutations in BRCA1 may have a higher likelihood of developing these cancers compared to those without the mutations. BRCA1 immunohistochemistry is commonly used in research and clinical settings. It can provide valuable information about the status of the BRCA1 protein in cancerous and non-cancerous tissues. Changes in BRCA1 expression can be.... (more)

Species: Rabbit Monoclonal **Cat#:** Z2812

IHC: Human breast carcinoma stained with ZR455

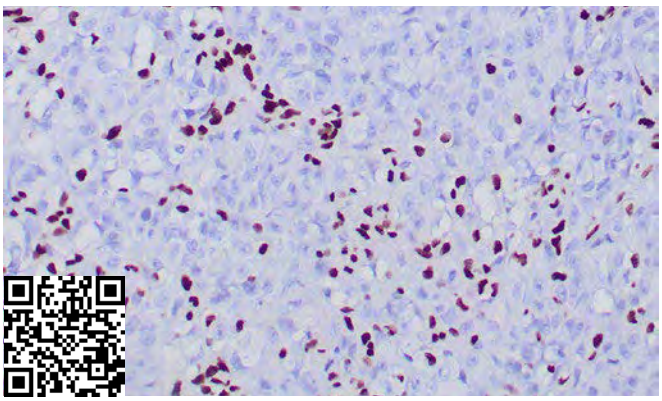


BRG1/SMARCA4 (clone ZR390) IVD

BRG1 is mutated in multiple human tumors, including hypercalcemic type of small cell carcinoma of ovary and uterine sarcoma and undifferentiated carcinoma. The SWI-SNF complex is involved in the activation of transcription via the remodeling of nucleosome structure in an ATP-dependent manner. Brm (also designated SNF2 alpha) and Brg-1 (also designated SNF2 beta) are the ATPase subunits of the mammalian SWI/SNF complex. (more)

Species: Rabbit Monoclonal **Cat#:** Z2746

IHC: Ovarian small cell carcinoma stained with ZR390

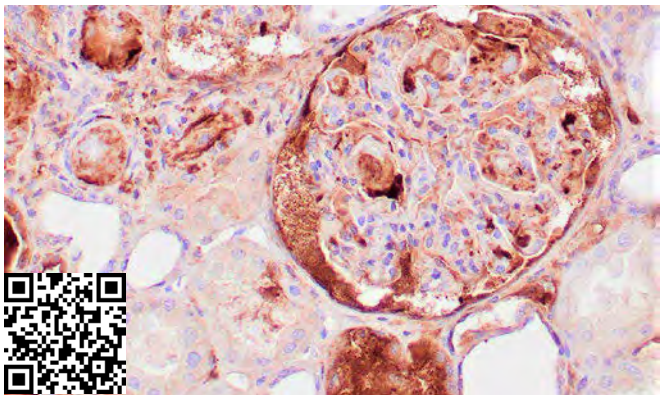


C3d (clone ZM369) IVD

C3d plays an important role in modulation of the adaptive immune response through the interaction with CR2. CR2 is important in the switched-isotype, high-affinity and memory humoral immune responses to T-dependent foreign antigens, as well as in the development of the natural antibody repertoire. This pH- and ionic strength-dependent association of C3d with CR2 represents a link between innate and adaptive immunity. (more)

Species: Mouse Monoclonal **Cat#:** Z2660

IHC: Human transplanted kidney stained with ZM369

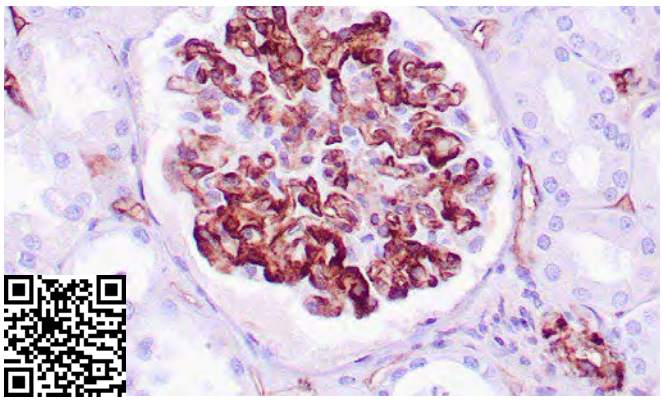


C4d (clone ZM78) IVD

C4d is an established marker of antibody-mediated acute renal allograft rejection and its proclivity for endothelium, this component can be detected in peritubular capillaries in both chronic renal allograft rejection as well as hyperacute rejection, acute vascular rejection, acute cellular rejection, and borderline rejection. It has been shown to be a significant predictor of transplant kidney graft survival and is an aid in treating acute rejection. (more)

Species: Mouse Monoclonal **Cat#:** Z2388

IHC: Human rejected kidney stained with ZM78

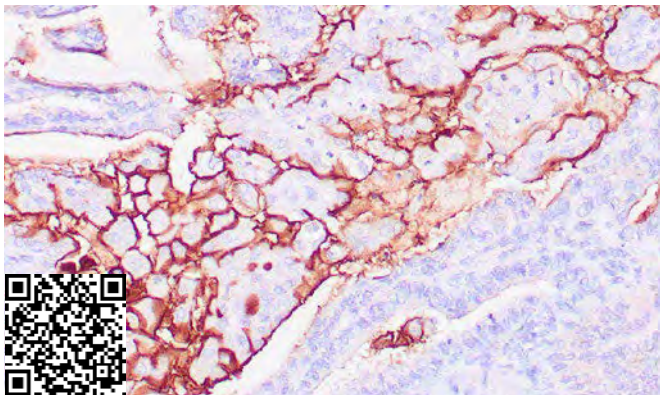


CA 125/MUC16 (clone ZM53) IVD

The Mucin family consists of Mucins 1-4, Mucin 5 (AC and B), Mucins 6-8, Mucins 11-13 and Mucins 15-17. The Mucin 16 protein (also commonly referred to as CA125), encoded for by the gene MUC16, is a tumor antigen Mucin 16, an ovarian cancer-associated antigen, is used as a marker to monitor the progress of epithelial ovarian cancer. (more)

Species: Mouse Monoclonal **Cat:** Z2363

IHC: Human ovarian carcinoma stained with ZM53

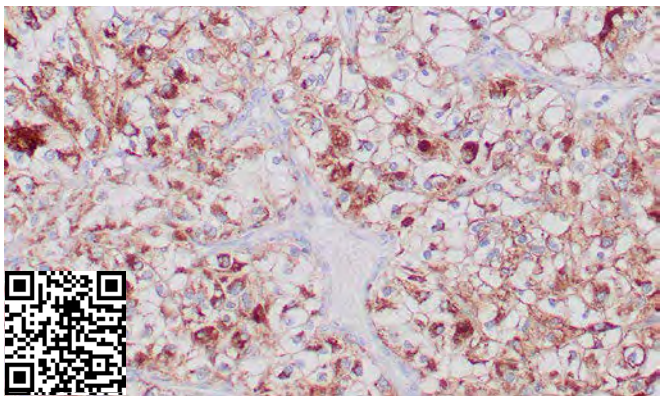


CA IX (clone ZR367) IVD

Recognizes a glycoprotein of ~200kDa, identified as carbonic anhydrase IX (CAIX/gp200). In the normal kidney, gp200 is localized along the brush border of the pars convoluta and pars recta segments of the proximal tubule and focally along the luminal surface of Bowman's capsule adjoining the outgoing proximal tubule. This MAb may help investigate carcinomas of proximal nephrogenic differentiation, especially those showing tubular differentiation.

Species: Rabbit Monoclonal **Cat#:** Z2740

IHC: Normal human renal tissue stained with ZR367

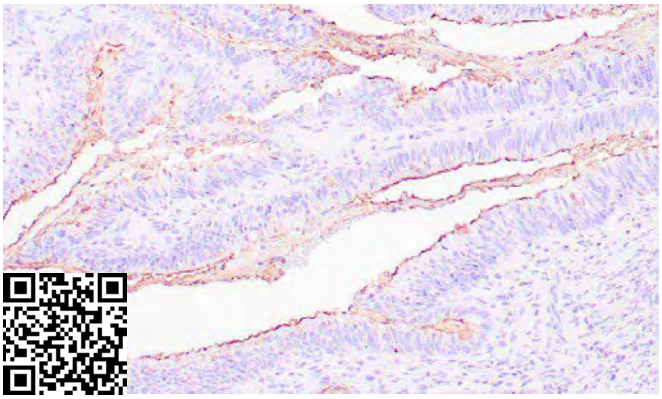


CA19-9 (clone 121SLE) IVD

CA19-9, is a sialyl Lewis a structure and is present in individuals expressing the Lewis a and/or Lewis b blood group antigens, and greatly enhanced in the majority of tumor cells in gastrointestinal (GI) carcinomas. Preoperative elevated CA19-9 levels in patients with stage I pancreatic carcinoma decrease to normal values following surgery. When used serially, CA19-9 can predict recurrence of disease prior to radiographic or clinical findings. (more)

Species: Mouse Monoclonal **Cat#:** Z2072

IHC: Human colon carcinoma stained with 121SLE

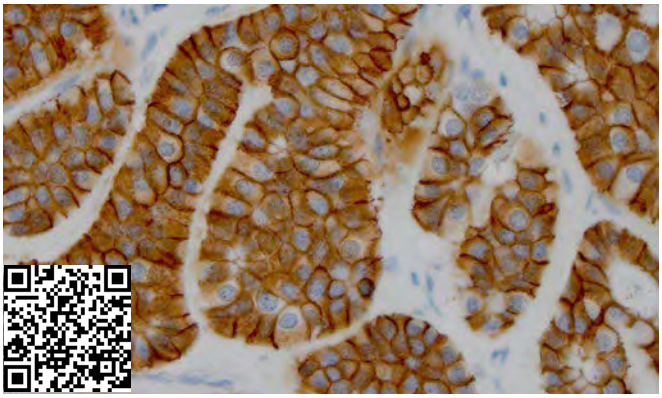


NEW Cadherin 17 (clone ZR418) IVD; RUO(EU)

Recognizes a protein of 120kDa, identified as Cadherin 17 (also known as LI Cadherin). member of a family of calcium-dependent adhesion molecules mediating cell-cell binding, critical to maintaining tissue structure and morphogenesis. LI-cadherin (for liver-intestine-cadherin) expression is restricted to liver and intestine tissues and is specifically localized to the basolateral domain of hepatocytes and enterocytes. Cadherin 17 is a novel diagnostic marker for adenocarcinomas of the digestive system. (more)

Species: Rabbit Monoclonal **Cat#:** Z2774

IHC: Human colon carcinoma stained with ZR418

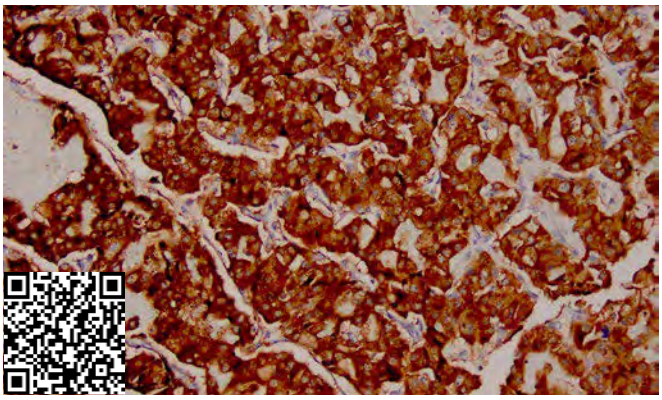


Calcitonin (clone ZM301) IVD

Calcitonin is a 32 aa polypeptide hormone that preserves skeletal integrity and reduces blood calcium levels by decreasing osteoclast activity in bones, calcium and phosphate reabsorption by kidney tubules, and calcium absorption by the intestines. Secretion of Calcitonin from the thyroid is regulated in part by estrogen, which increases Calcitonin mRNA levels. The Calcitonin gene, CALCA, undergoes tissue-specific RNA alternative splicing, resulting in the production of different mRNA transcripts. (more)

Species: Mouse Monoclonal **Cat#:** Z2731

IHC: Thyroid medullary carcinoma stained with ZM301

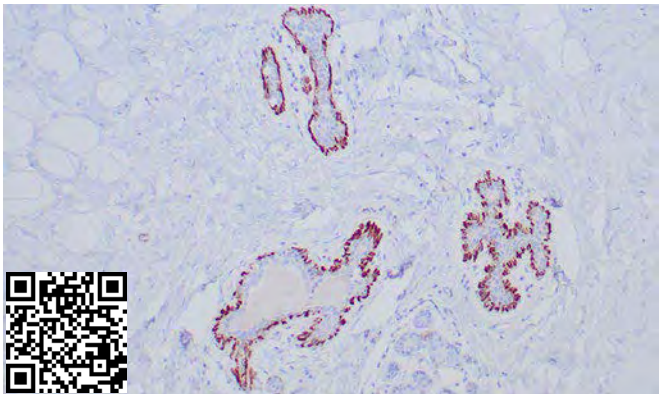


Caldesmon (clone ZR413) IVD; RUO(EU)

Recognizes a protein of 150kDa (high molecular weight variant of Caldesmon). Two closely related variants of human caldesmon have been identified, which are different in their electrophoretic mobility and cellular distribution. The h-caldesmon variant (120'150kDa) is predominantly expressed in smooth muscle, whereas l-caldesmon (70'80kDa) is found in non-muscle tissue and cells. Neither of the two variants has been detected in skeletal muscle. This MAb recognizes only the 150kDa variant... (more)

Species: Rabbit Monoclonal **Cat#:** Z2769

IHC: Normal human breast tissue stained with ZR413

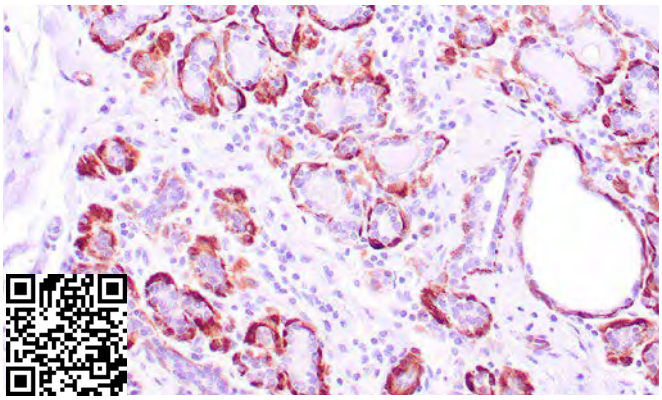


Caldesmon (clone ZM79) IVD

Two closely related variants of human caldesmon have been identified which differ in their electrophoretic mobility and cellular distribution. The h-caldesmon variant(120-150kDa) is predominantly expressed in smooth muscle whereas l-caldesmon (70-80kDa) is found in non-muscle tissue and cells. Neither of the two variants has been detected in skeletal muscle.

Species: Mouse Monoclonal **Cat#:** Z2389

IHC: Human breast tissue stained with ZM79

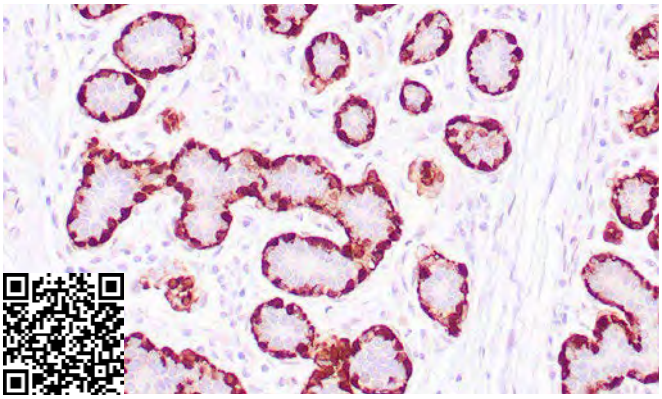


Calponin-1 (clone ZR297) IVD

This MAb reacts with only the 34kDa form of calponin in extracts of human aortic medial smooth muscle and is unreactive with fibroblast extracts of cultivated human foreskin. Calponin expression is restricted to smooth muscle cells and has been shown to be a marker of the differentiated (contractile) phenotype of developing smooth muscle. (more)

Species: Rabbit Monoclonal **Cat:** Z2612

IHC: Human normal breast tissue stained with ZR297

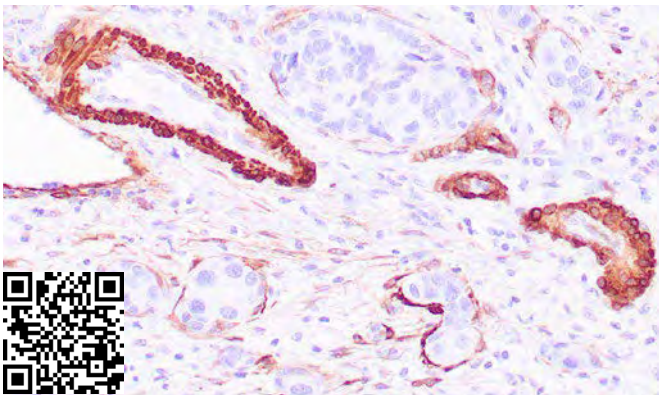


Calponin-1 (clone ZM21) IVD

This MAb reacts with only the 34kDa form of calponin in extracts of human aortic medial smooth muscle and is unreactive with fibroblast extracts of cultivated human foreskin. Calponin expression is restricted to smooth muscle cells and has been shown to be a marker of the differentiated (contractile) phenotype of developing smooth muscle. (more)

Species: Mouse Monoclonal **Cat#:** Z2341

IHC: Breast ductal carcinoma in situ stained with ZM21

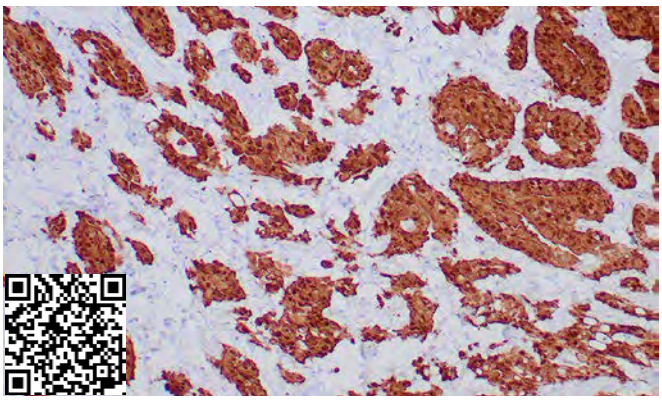


Calretinin (clone ZR415) IVD; RUO(EU)

Recognizes a protein of about 29kDa, which is identified as Calretinin (also known as Calbindin 2). Calretinin is a vitamin D-dependent calcium-binding protein involved in calcium signaling. It is present in subsets of neurons throughout the brain and spinal cord, including sensory ganglia. Antibody to calretinin is useful in differentiating mesothelioma from adenocarcinomas of the lung. It also aids in differentiating adrenal cortical neoplasms from pheochromocytomas.

Species: Rabbit Monoclonal **Cat#:** Z2771

IHC: Human mesothelioma stained with ZR415

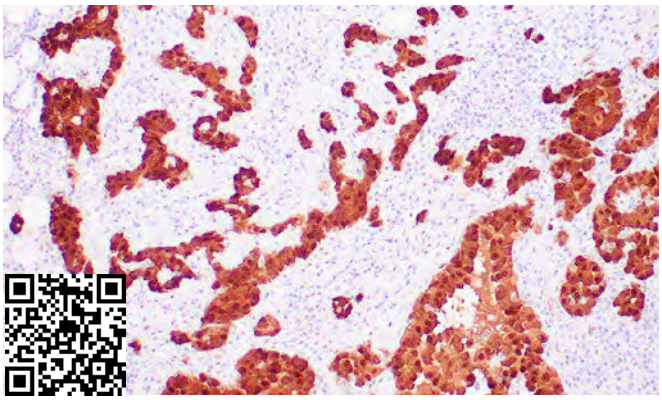


Calretinin (clone ZM85) IVD

Recognizes a protein of about 29kDa identified as Calretinin. Calretinin is a vitamin D-dependent calcium-binding protein involved in calcium signaling asnd present in subsets of neurons throughout the brain and spinal cord, including sensory ganglia. Antibody is useful in differentiating mesothelioma from adenocarcinomas of the lung. It also aids in differentiating adrenal cortical neoplasms from pheochromocytomas. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2392

IHC: Human mesothelioma stained with ZM85

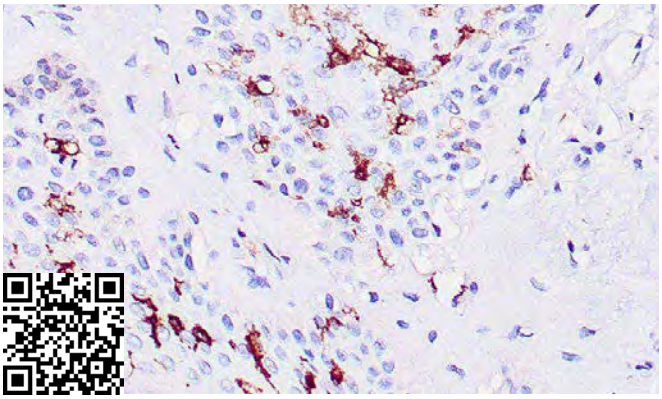


CD1a (clone O10) IVD

CD1 is expressed on cortical thymocytes, Langerhans cells, and dendritic cells. O10 detects cortical thymocytes, Langerhans cells in epidermis, dendritic cells of dermis and Langerhans cells of mucosa of tonsil. It may also detect small focal groups of lymphocytes outside the germinal centers of tonsil indicating a cross reaction with CD1b. This antibody is useful in the characterization of leukemias and lymphomas. (more)

Species: Mouse Monoclonal **Cat#:** Z2096

IHC: Human skin stained with O10

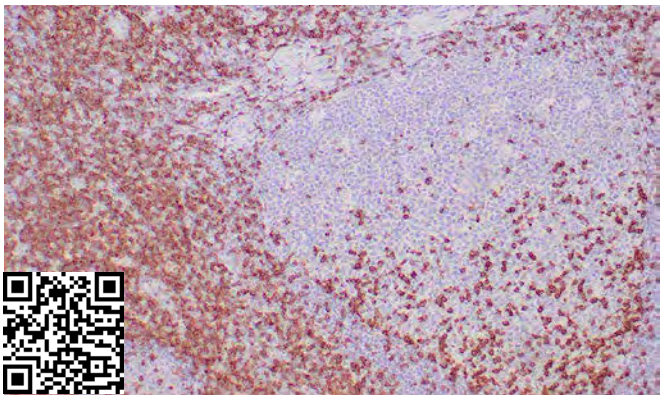


CD2 (clone ZR100) IVD

CD2 is mainly present on the surface of mature T cells and NK cell membranes, while B cells are usually not expressed. It can be used to label the diagnosis and study of normal T cells and their associated tumors, such as pre-t cell lymphoma, marginal T cell lymphoma, and anaplastic cell lymphoma. CD2 antibody is helpful for the identification of precursor and mature T-cell lymphomas. Aberrant loss of CD2 in T-cell lymphomas may help to distinguish them from reactive T-cell proliferation.

Species: Rabbit Monoclonal **Cat#:** Z2603

IHC: Human tonsil stained with ZR100

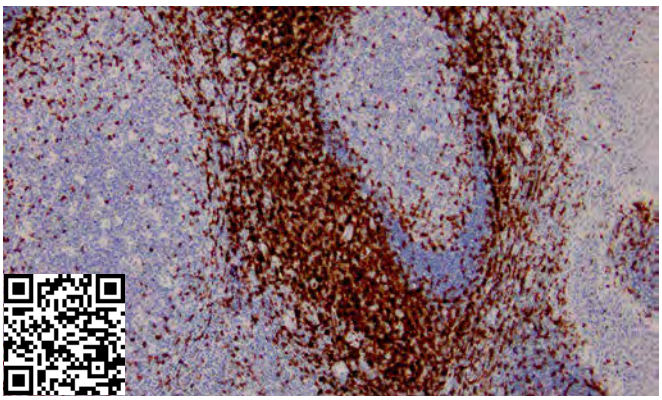


CD3 (clone ZR414) IVD; RUO(EU)

Recognizes the epsilon chain of CD3, and is closely associated at the lymphocyte cell surface with the T cell antigen receptor (TCR). First detectable in early thymocytes and probably represents one of the earliest signs of commitment to the T cell lineage. In cortical thymocytes, CD3 is predominantly intra-cytoplasmic. However, in medullary thymocytes, it appears on the T cell surface. A highly specific marker for T cells and is present in the majority of T cell neoplasms. (more)

Species: Rabbit Monoclonal **Cat#:** Z2770

IHC: Human lymph node stained with ZR414

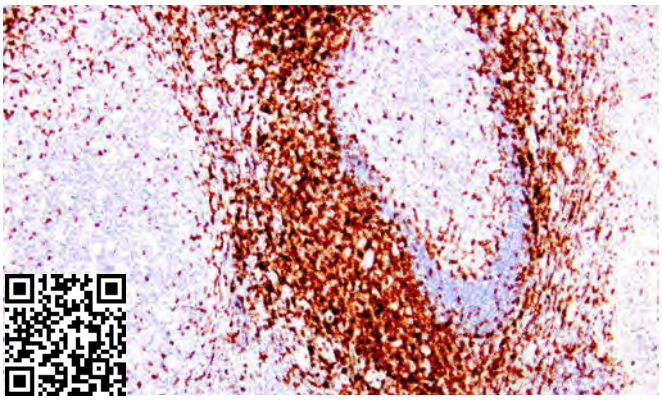


CD3 (clone ZM45) IVD

This antibody reacts with the intracytoplasmic portion of the CD3 antigen expressed by T cells. It stains human T cells in both the cortex and medulla of the thymus and in peripheral lymphoid tissues. This antibody is suitable for staining normal and neoplastic T cells in formalin-fixed, paraffin-embedded tissues. A synthetic 13-mer peptide corresponding to aa 156-168 of the epsilon chain of human CD3 protein.

Species: Mouse Monoclonal **Cat#:** Z2352

IHC: Human lymph node stained with ZM45

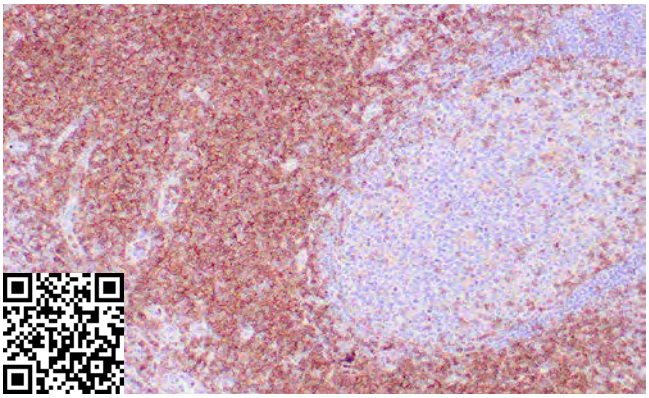


CD4 (clone ZM180) IVD

The protein functions to initiate or augment the early phase of T-cell activation, and may function as an important mediator of indirect neuronal damage in infectious and immune-mediated diseases of the central nervous system. Anti-CD4 is used in the immunohistochemical staining of lymphoproliferative disorders to evaluate tumors with CD4 aberrant expression. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2482

IHC: Human tonsil stained with ZM180

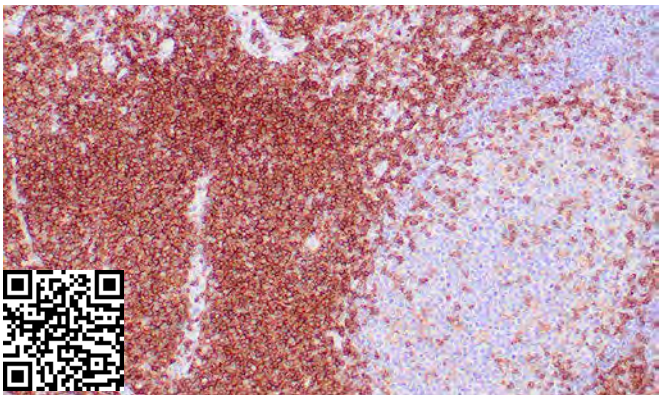


CD4 (clone ZR110) IVD

CD4, a single chain transmembrane glycoprotein, is found on a T cell subset (helper/inducer) representing 45% of peripheral blood lymphocytes. It is also present on 80% of thymocytes and at a lower level on monocytes. It is involved in recognition of antigen presented along with MHC class II by APCs. It serves as receptor for HIV.

Species: Rabbit Monoclonal **Cat#:** Z2420

IHC: Human tonsil stained with ZR110

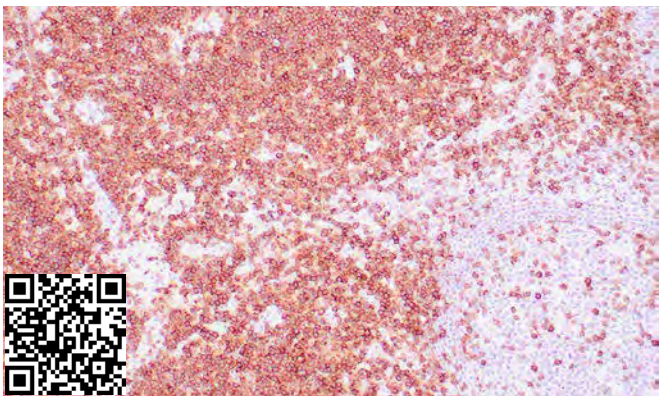


CD5 (clone ZM61) IVD

Recognizes CD5, a 67kDa transmembrane protein. Anti-CD5 detection is diagnostic in CLL/SLL within a panel of other B-cell markers, especially one that includes anti-CD23. Anti-CD5 is also very useful in differentiating among mature small lymphoid cell malignancies. In addition, anti-CD5 can be used in distinguishing thymic carcinoma (+) from thymoma (-). Anti-CD5 does not react with granulocytes or monocytes. (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2371

IHC: Human tonsil stained with ZM61

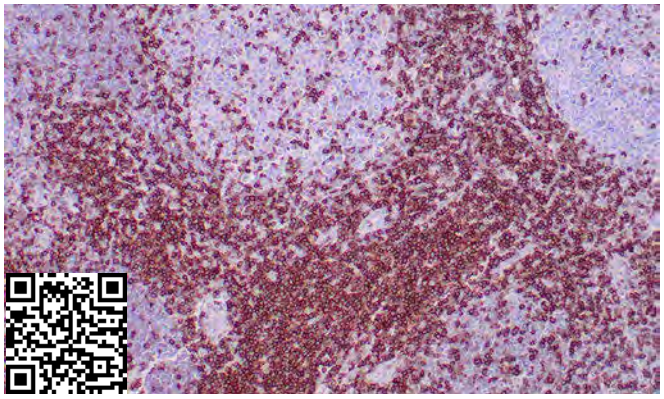


CD5 (clone ZR228) IVD

Recognizes CD5, a 67kDa transmembrane protein. Anti-CD5 detection is diagnostic in CLL/SLL within a panel of other B-cell markers, especially one that includes anti-CD23. Anti-CD5 is also very useful in differentiating among mature small lymphoid cell malignancies. In addition, anti-CD5 can be used in distinguishing thymic carcinoma (+) from thymoma (-). Anti-CD5 does not react with granulocytes or monocytes. (more)

Species: Rabbit Monoclonal **Cat:** Z2521

IHC: Human tonsil stained with ZR228

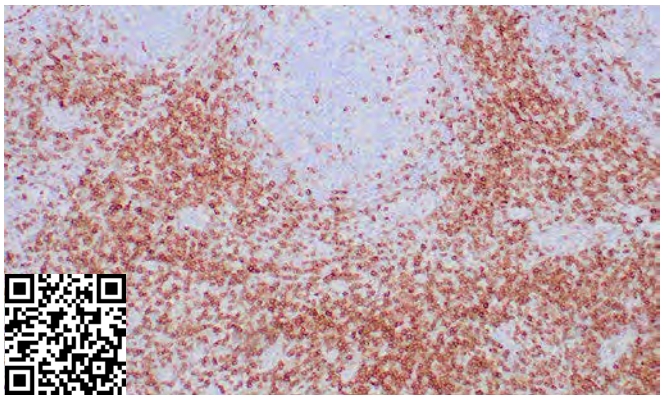


CD7 (clone ZR416) IVD; RUO(EU)

Recognizes a protein of 40kDa, identified as CD7 (also known as gp40, Leu9). CD7 is a member of the immunoglobulin gene superfamily. Its N-terminal amino acids 1-107 are highly homologous to Ig kappa-L chains whereas the carboxyl-terminal region of the extracellular domain is proline-rich and has been postulated to form a stalk from which the Ig domain projects. CD7 is expressed on the majority of immature and mature T-lymphocytes, and and T cell leukemia. It is also found on natural killer cells, a... (more)

Species: Rabbit Monoclonal **Cat#:** Z2772

IHC: Human tonsil stained with ZR416

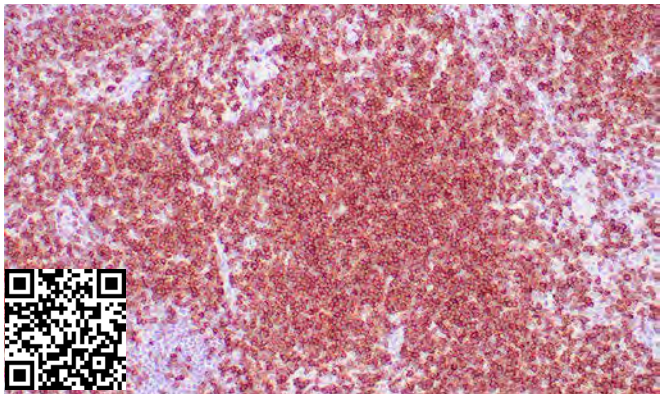


CD7 (clone ZM213) IVD

CD7 plays an essential role in T-cell interactions and also in T-cell/B-cell interactions during early lymphoid development. CD7 is expressed on thymocytes, T-and natural killer cells, and progenitors of lymphoid and myeloid cells. Loss of CD7 expression by neoplastic lymphocytes is considered a distinguishing characteristic of mycosis fungoides (MF) and cutaneous T-cell lymphoma. (more)

Species: Mouse Monoclonal **Cat#:** Z2548

IHC: Human lymph node stained with ZM213

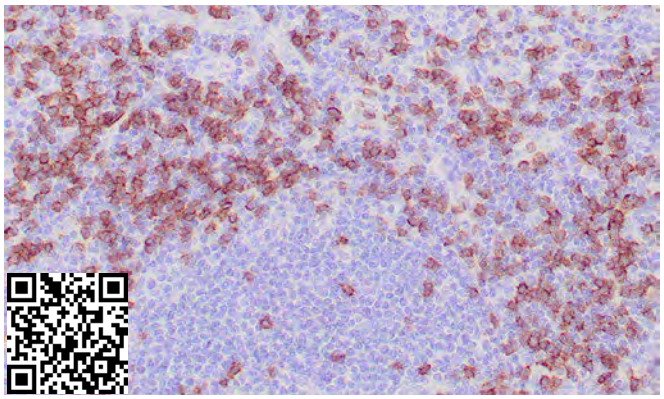


CD8 (clone ZR286) IVD

CD8 is expressed on approximately one-third of peripheral blood T cells (the CD4-negative cells) and is detected at a low level on some NK cells. In normal tonsil, large numbers of CD8+ lymphocytes were present within the paracortex; occasionally positive cells were also identified within germinal centers and within the investing squamous epithelium. In other tissues, only lymphoid cells and cells of histiocyte lineage showed positive staining for CD8. (more)

Species: Rabbit Monospecific Monoclonal **Cat:** Z2601

IHC: Human tonsil stained with ZR286

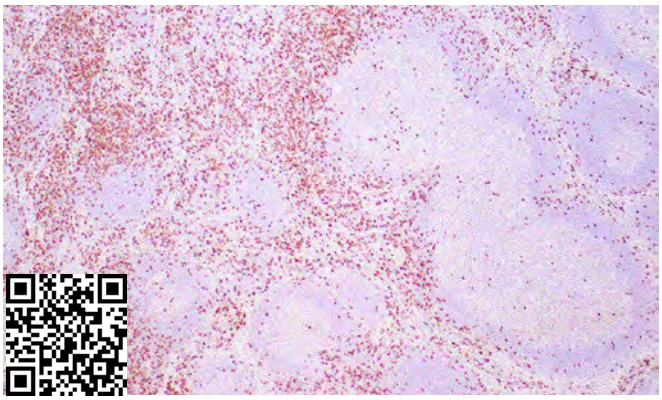


CD8 (clone ZM54) IVD

CD8 is expressed on approximately one-third of peripheral blood T cells (the CD4-negative cells) and is detected at a low level on some NK cells. In normal tonsil, large numbers of CD8+ lymphocytes were present within the paracortex; occasionally positive cells were also identified within germinal centers and within the investing squamous epithelium. In other tissues, only lymphoid cells and cells of histiocyte lineage showed positive staining for CD8. (more)

Species: Mouse Monoclonal **Cat#:** Z2364

IHC: Human tonsil stained with ZM54

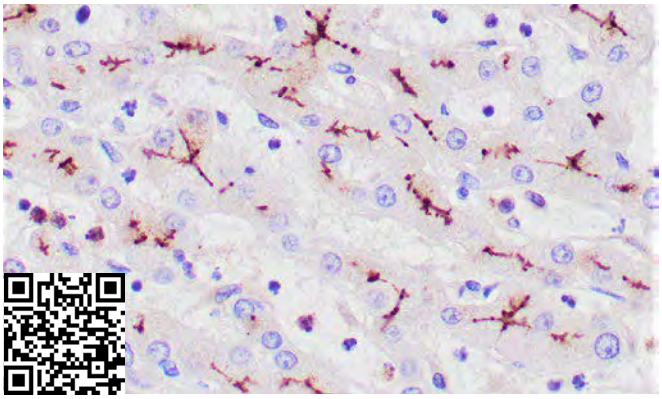


CD10 (clone ZR329) IVD

CD10 is expressed on the cells of lymphoblastic, Burkitt's, and follicular germinal center lymphomas, cells from patients with chronic myelocytic leukemia (CML) and on the surface of normal early lymphoid progenitor cells, immature B cells within adult bone marrow and germinal center B cells within lymphoid tissue. CD10 is also present on breast myoepithelial cells, bile canaliculi, fibroblasts, with especially high expression... (more)

Species: Rabbit Monoclonal **Cat#:** Z2678

IHC: Human liver stained with ZR329

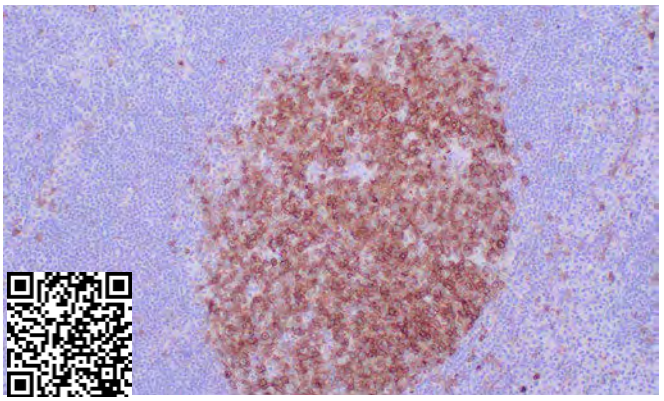


NEW CD10 (clone 55C6) IVD; RUO(EU)

Recognizes CD10, also known as Common Acute Lymphocytic Leukemia Antigen (CALLA), a cell surface enzyme with neutral metalloendopeptidase activity which inactivates a variety of biologically active peptides. CD10 is expressed on the cells of lymphoblastic, Burkitt's, and follicular germinal center lymphomas, and on cells from patients with chronic myelocytic leukemia (CML). CD10 is also expressed on the surface of normal early lymphoid progenitor.... (more)

Species: Mouse Monoclonal **Cat#:** Z2809

IHC: Human follicular lymphoma stained with 55C6

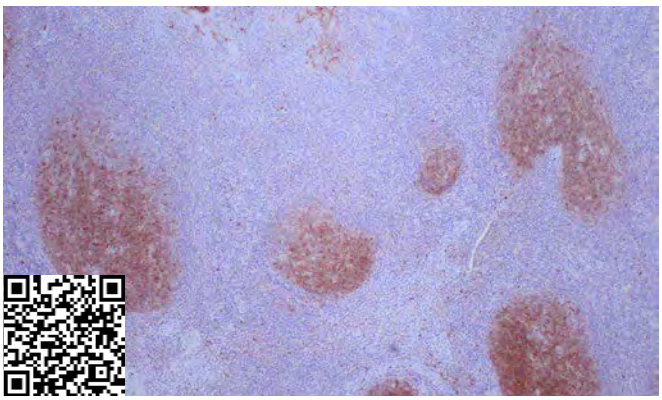


NEW CD10 (clone ZR468) IVD; RUO(EU)

CD10 is expressed on the cells of lymphoblastic, Burkitt's, and follicular germinal center lymphomas, cells from patients with chronic myelocytic leukemia (CML) and on the surface of normal early lymphoid progenitor cells, immature B cells within adult bone marrow and germinal center B cells within lymphoid tissue. CD10 is also present on breast myoepithelial cells, bile canaliculi, fibroblasts, with especially high expression... (more)

Species: Rabbit Monoclonal **Cat#:** Z2828

IHC: Human follicular lymphoma stained with ZR468

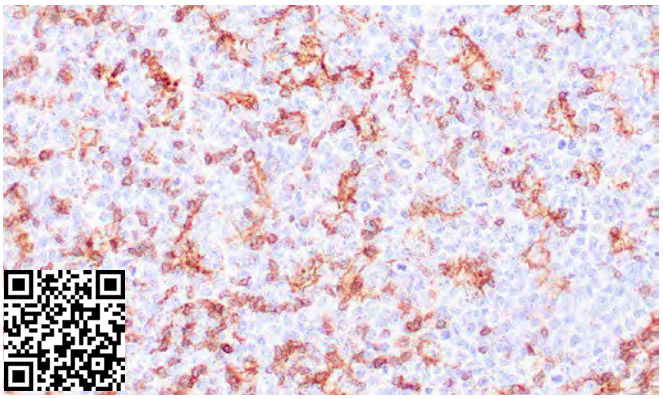


CD11c (clone ZM103) IVD

CD11c is expressed prominently on the plasma membranes of monocytes, tissue macrophages, NK cells, and most dendritic cells (DCs). A lower level of expression is also observed on neutrophils as a result of its high level of expression on most DCs. An antibody to CD11c may aid in identification of lesions with histiocytic origin. It may also be used as a marker for hairy cell leukemia in paraffin-embedded tissues. (more)

Species: Mouse Monoclonal **Cat#:** Z2414

IHC: Human tonsil stained with ZM103

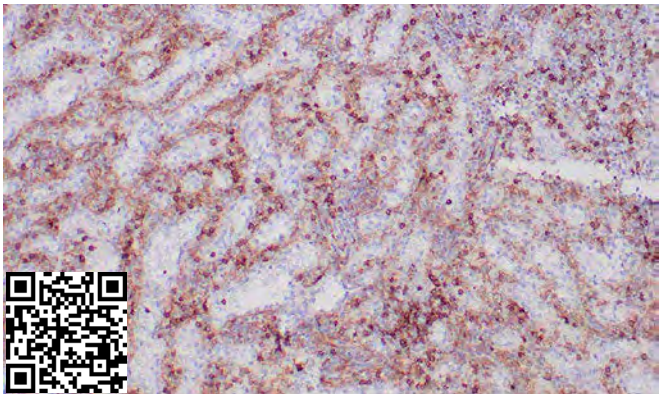


CD13 (clone ZM287) IVD

Recognizes an integral membrane glycoprotein of 150kDa, identified as CD13 (also known as aminopeptidase-N). Recognizes an extracellular epitope. The CD13 antigen is present on most cells of myeloid origin, including granulocytes, monocytes, mast cells, and GM-progenitor cells. Also expressed by most AML and CML in myeloid blast crises and in a smaller fraction of lymphoid leukemias. CD13 is absent from normal lymphocytes, platelets, and erythrocytes. CD13 is... (more)

Species: Mouse Monoclonal **Cat#:** Z2524

IHC: Human spleen stained with ZM287

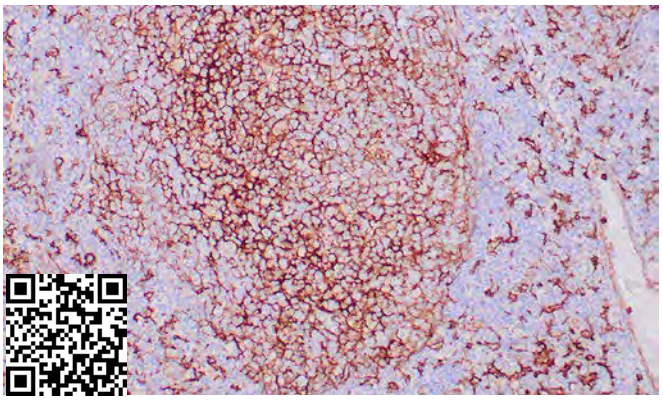


CD14 (clone ZM104) IVD

Recognizes 55kDa CD14 (also known as lipopolysaccharide receptor). Expressed on monocytes and macrophages and weakly on the surface of neutrophils. CD14 is anchored to cells by linkage to glycosylphosphatidylinositol (GPI) and functions as a high-affinity receptor for complexes of LPS and LPS binding protein (LBP). Soluble CD14, also binding to LPS, acts at a physiological concentration as an LPS agonist and has, at higher concentrations, an LPS antagonizing effect in cell activation.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2415

IHC: Human tonsil stained with ZM104

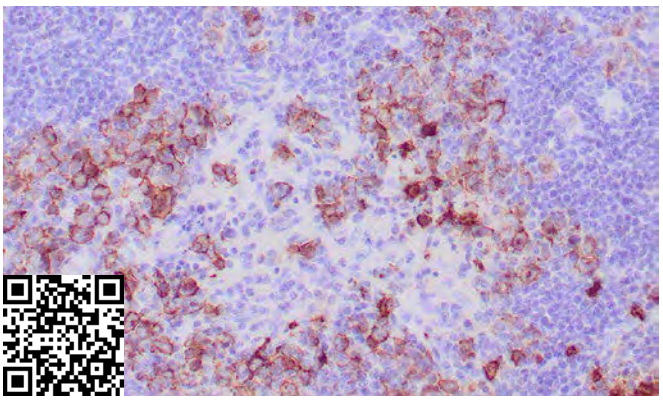


CD15 (clone ZR417) IVD; RUO(EU)

3-fucosyl-N-acetyllactosamine (3-FAL) or CD15 or X-hapten plays a role in mediating phagocytosis, bactericidal activity, and chemotaxis. It is present on 95% of granulocytes including neutrophils and eosinophils and to a lesser degree on monocytes. CD15 is also expressed in Reed-Sternberg cells and some epithelial cells. CD15 antibody is very useful in the identification of Hodgkins disease. CD15 is occasionally expressed in large cell lymphomas of both B and T phenotypes which have a distinct histological appearance.

Species: Rabbit Monoclonal **Cat#:** Z2773

IHC: Human Hodgkin's lymphoma stained with ZR417

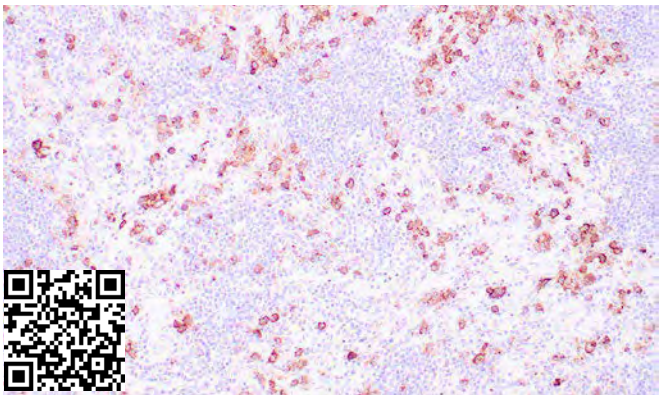


CD15 (clone MMA) IVD

CD15 is present on >95% of granulocytes including neutrophils and eosinophils and to a lesser degree on monocytes and also expressed in Reed-Sternberg cells and some epithelial cells. CD15 antibody is very useful in the identification of Hodgkin's disease. CD15 is occasionally expressed in large cell lymphomas of both B and T phenotypes which otherwise have a quite distinct histological appearance.

Species: Mouse Monoclonal **Cat:** Z2028

IHC: Human Hodgkin lymphoma stained with MMA

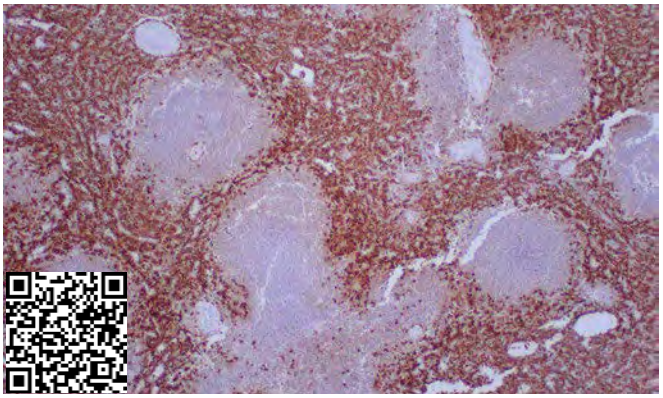


NEW CD16 (clone ZR457) IVD; RUO(EU)

CD16 is expressed on the surface of various immune cells, particularly natural killer (NK) cells, monocytes, macrophages, and neutrophils. It plays a vital role in the immune system's ability to respond to infections and other threats. CD16 immunohistochemistry is helpful in the differential diagnosis of hepatosplenic gamma delta T-cell lymphoma and gamma delta T-cell large granular lymphocyte leukemia from other peripheral T-cell lymphomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2816

IHC: Human spleen stained with ZR457

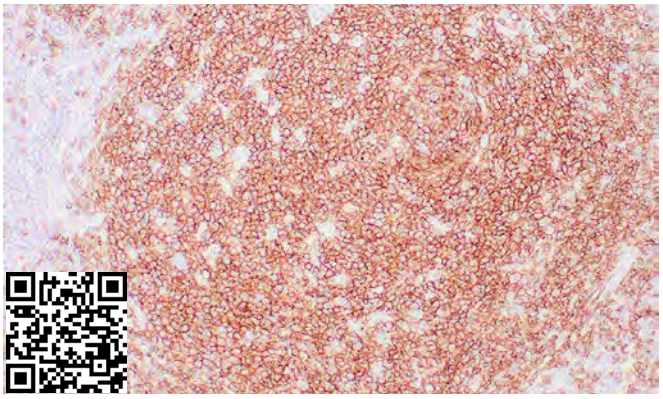


CD19 (clone ZR212) IVD; RUO(EU)

In normal lymphoid tissue CD19 is observed in germinal centers (on both B cells and follicular dendritic cells), in mantle zone cells and in scattered cells in the interfollicular areas, with an overall immunoreactivity pattern similar to that of CD20 and CD22. However, in contrast to CD20, CD19 is also expressed in pre-B cells. CD19 positivity is seen in the vast majority of B-cell neoplasms (B-lymphoblastic lymphoma, small... (more)

Species: Rabbit Monoclonal **Cat#:** Z2547

IHC: Human tonsil stained with ZR212

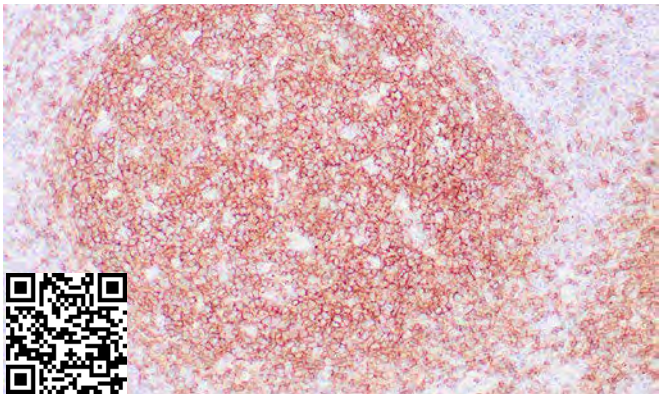


CD19 (clone ZM179) IVD

In normal lymphoid tissue CD19 is observed in germinal centers (on both B cells and follicular dendritic cells), in mantle zone cells and in scattered cells in the interfollicular areas, with an overall immunoreactivity pattern similar to that of CD20 and CD22. However, in contrast to CD20, CD19 is also expressed in pre-B cells. CD19 positivity is seen in the vast majority of B-cell neoplasms (B-lymphoblastic lymphoma, small... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2481

IHC: Human tonsil stained with ZM179

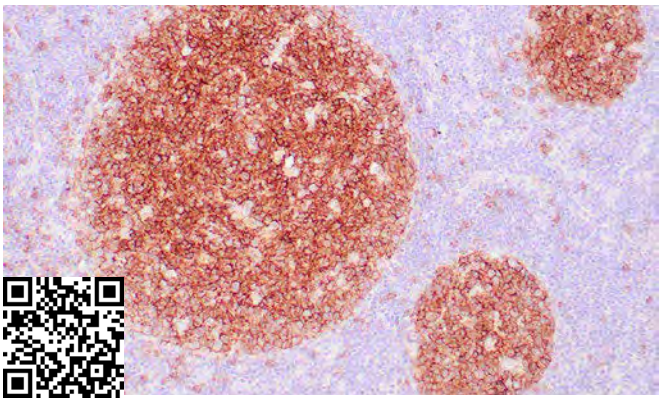


CD20 (clone L26) IVD

CD20 is a non-Ig differentiation antigen of B cells and the expression of CD20 is restricted to normal and neoplastic B cells, being absent from all other leukocytes and tissues. CD20 is the most specific B-cell marker used in paraffin immunohistochemistry. It acts as calcium channel involved in B cell activation and cell cycle progression.

Species: Mouse Monoclonal **Cat#:** Z2059

IHC: Human lymph node stained with L26

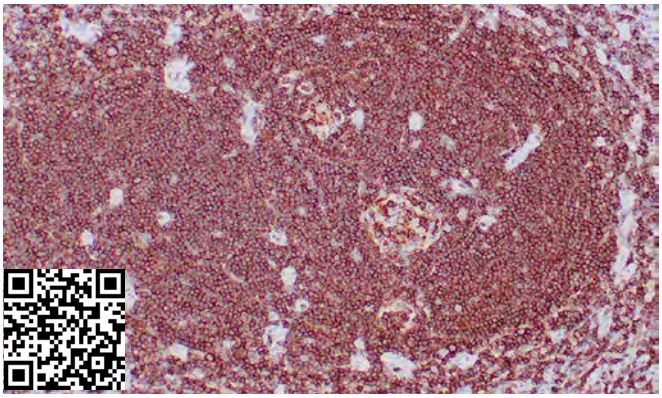


CD20 (clone ZR243) IVD; RUO(EU)

Recognizes a protein of 30-33kDa, which is identified as CD20. CD20 is expressed by pre-B-cells and persists during all stages of B-cell maturation but is lost upon terminal differentiation into plasma cells. This MAb can be used for immunophenotyping of leukemia and malignant cells, B lymphocyte detection in peripheral blood, and B cell localization in tissues. Reactivity has also been noted with Reed-Sternberg cells in cases of Hodgkin's disease... (more)

Species: Rabbit Monoclonal **Cat#:** Z2717

IHC: human lymph stained with with ZR243

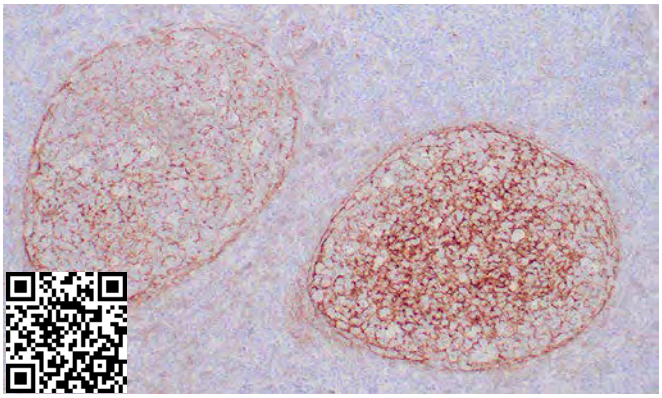


CD21 (clone ZR419) IVD; RUO(EU)

Recognizes a protein of 140kDa, which is identified as the complement receptor 2 (CR2) / CD21. This protein is expressed strongly on mature B cells, follicular dendritic cells and weakly on immature thymocytes and T lymphocytes. In B-cell ontogeny, CD21 appears after the pre-B-stage, is maintained during peripheral B-cell development and is lost upon terminal differentiation into plasma cells. CD21 expression is also gradually lost after stimulation of B cells in vitro. CD21 functions as receptor for C3d, C3dg and ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2775

IHC: Human tonsil stained with ZR419

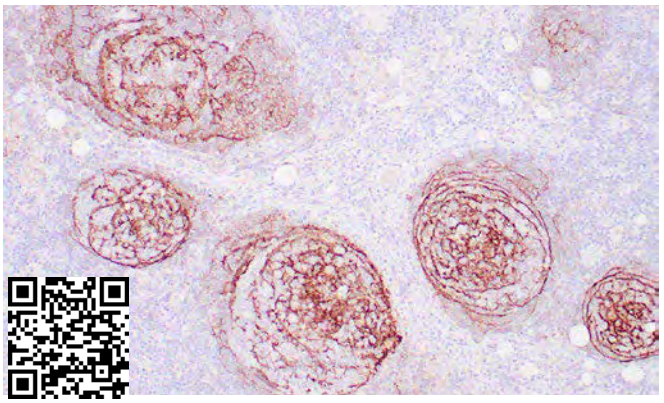


CD21 (clone ZM75) IVD

Recognizes a protein of 140kDa, which is identified as the complement receptor 2 (CR2) / CD21. This protein is expressed strongly on mature B cells, follicular dendritic cells and weakly on immature thymocytes and T lymphocytes. In B-cell ontogeny, CD21 appears after the pre-B-stage, is maintained during peripheral B-cell development and is lost upon terminal differentiation into plasma cells. (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2385

IHC: Human tonsil stained with ZM75

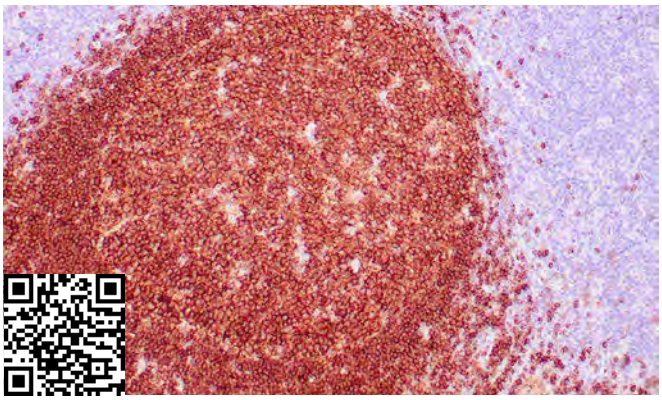


CD22 (clone ZM183) IVD

CD22 expression is restricted to normal and neoplastic B cells and is absent from other haemopoietic cell types. In B-cell ontogeny, CD22 is first expressed in the cytoplasm of pro-B and pre-B cells, and on the surface as B cells mature to become IgD+. It is not expressed by plasma cells, CD22 is found highly expressed in follicular mantle and marginal zone B-cells, and while germinal center B-cells are relatively weak. (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2496

IHC: Human spleen stained with ZM183

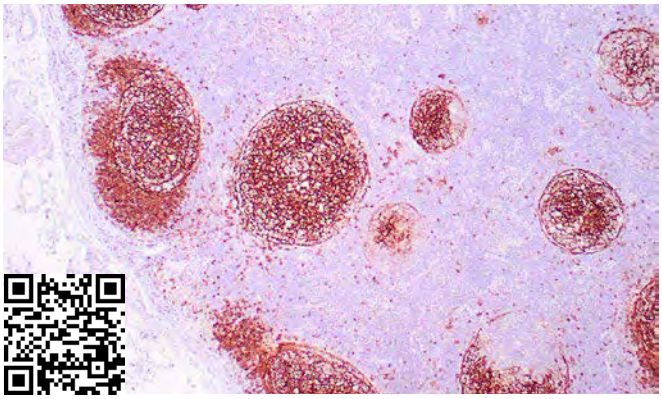


CD23 (clone ZM209) IVD

CD23 may play a role in antigen presentation by B cells by interacting with CD40. The truncated molecule can be secreted, then function as a potent mitogenic growth factor. CD23 is expressed on a subpopulation of peripheral blood cells, B-lymphocytes and on EBV transformed B lymphoblastoid cell lines. CD23 is also detected in neoplastic cells from cases of B cell chronic lymphocytic leukemia. (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2545

IHC: Human tonsil stained with ZM209

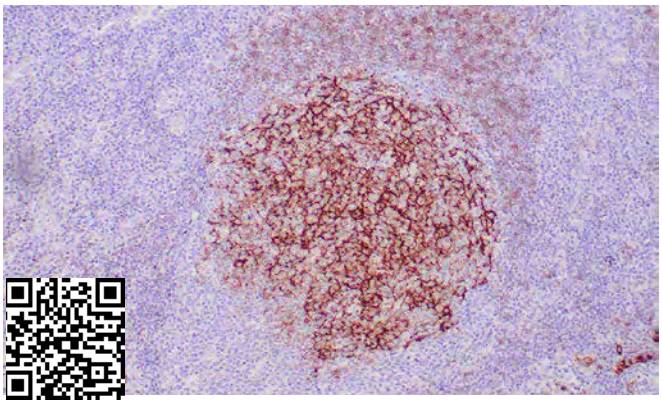


CD23 (clone ZR225) IVD

CD23 may play a role in antigen presentation by B cells by interacting with CD40. The truncated molecule can be secreted, then function as a potent mitogenic growth factor. CD23 is expressed on a subpopulation of peripheral blood cells, B-lymphocytes and on EBV transformed B lymphoblastoid cell lines. CD23 is also detected in neoplastic cells from cases of B cell chronic lymphocytic leukemia. (more)

Species: Rabbit Monoclonal **Cat#:** Z2516

IHC: Human tonsil stained with ZR225

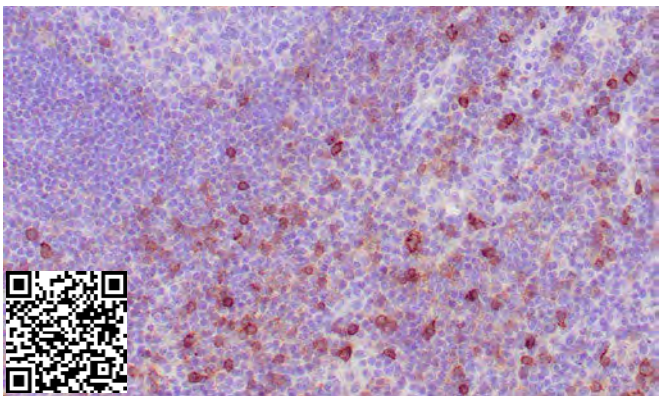


NEW CD25 (ZM466 clone) IVD; RUO(EU)

CD25, also known as the Interleukin-2 receptor alpha chain (IL-2Rα), is found on the surface of certain immune cells. It plays a crucial role in the immune system by modulating the activity and function of T cells. CD25 antibody expression is a reliable diagnostic tool for distinguishing neoplastic mast cell aggregates from reactive proliferations. CD25 is overexpressed in some hematologic malignancies, such as adult T-cell leukemia/lymphoma (ATLL) and... (more)

Species: Mouse Monoclonal **Cat#:** Z2817

IHC: Human spleen stained with ZM466

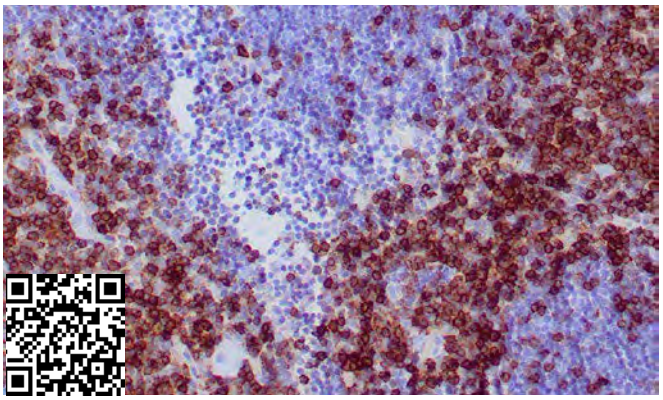


CD27 (clone ZR402) IVD; RUO(EU)

Recognizes a protein of a disulfide-linked 120kDa dimer, identified as CD27. It is expressed on the majority of peripheral T cells, medullary thymocytes, memory-type B cells, and natural killer cells. CD27 binds to its ligand CD70, a member of the TNF family, and induces T-cell co-stimulation and B-cell activation. It also interacts with TRAFs and is involved in activation of NFkappa B and SAPK/JNK and induces apoptosis. (more)

Species: Rabbit Monoclonal **Cat:** Z2758

IHC: Hhuman thymus stained with ZR402

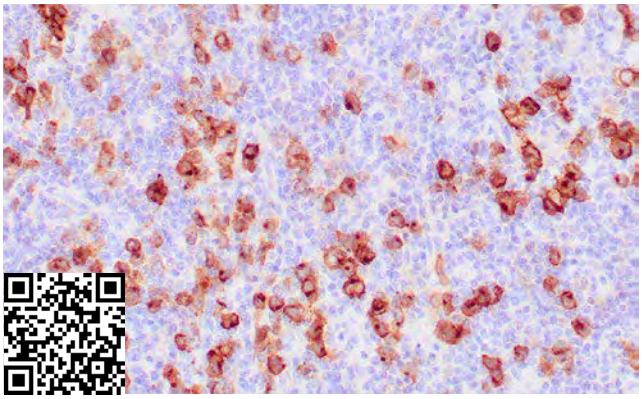


CD30 (clone ZR248) IVD

In Hodgkin's disease, CD30/Ki-1 antigen is expressed by mononuclear-Hodgkin and multinucleated Reed-Sternberg cells. This MAb distinguishes large cell lymphomas derived from activated lymphoid cells from histiocytic malignancies and lymphomas derived from resting and precursor lymphoid cells or from anaplastic carcinomas. (more)

Species: Rabbit Monoclonal **Cat:** Z2489

IHC: Human Hodgkin lymphoma stained with ZR248

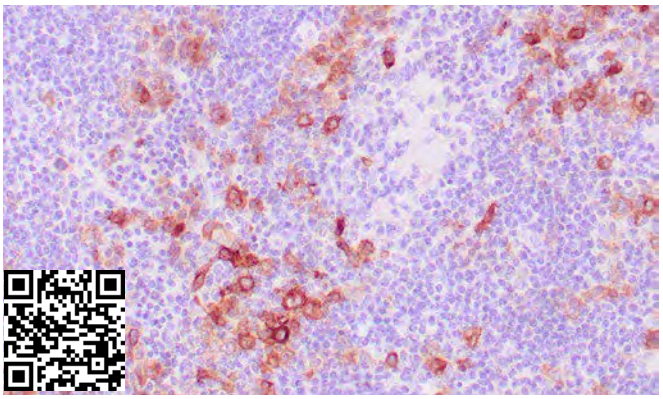


CD30 (clone Ber-H2) IVD

The CD30/Ki-1 antigen is expressed by mononuclear Hodgkin and multinucleated Reed-Sternberg cells in Hodgkin's disease, by the tumor cells of a majority of anaplastic large cell lymphomas, and by a varying proportion of activated T and B cells. Ber-H2 distinguishes large cell lymphomas derived from activated lymphoid cells from histiocytic malignancies and lymphomas derived from resting and precursor... (more)

Species: Mouse Monoclonal **Cat#:** Z2101

IHC: Human Hodgkin lymphoma stained with Ber-H2

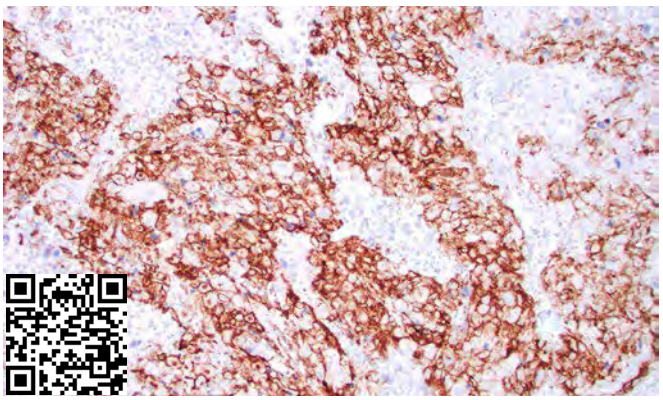


CD31 (clone JC70A) IVD

JC/70A reacts with endothelial cells in normal tissues and in benign and malignant proliferations. In cryostat sections and blood smears the antibody also stains megakaryocytes, platelets and occasionally plasma cells. Antibody to CD31 is of value in the study of benign and malignant vascular tumors. Staining for CD31 has also been used to measure angiogenesis, which reportedly predicts tumor recurrence. (more)

Species: Mouse Monoclonal **Cat#:** Z2136

IHC: Human angiosarcoma stained with JC70A

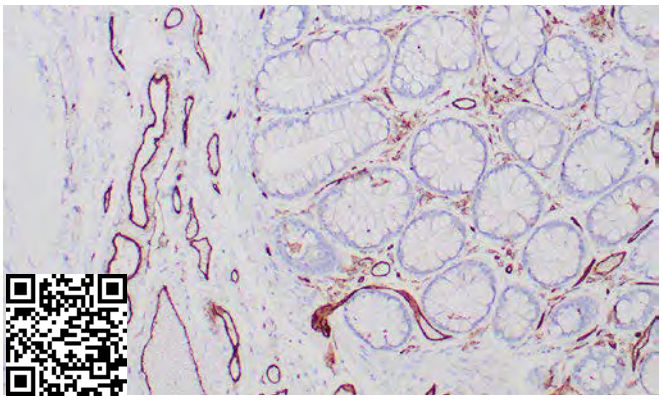


CD31 (clone ZR274) IVD

CD31 (PECAM-1) is a transmembrane glycoprotein member of the immunoglobulin supergene family of adhesion molecule-sand is expressed by stem cells of the hematopoietic system. CD31 MAb reacts with normal, benign, and malignant endothelial cells, which make up the blood vessel lining. The level of CD31 expression can help to determine the degree of tumor angiogenesis, and a high level of CD31 expression may imply a rapidly growing tumor and potentially a predictor of tumor recurrence.

Species: Rabbit Monoclonal **Cat#:** Z2725

IHC: Human colon stained with ZR274

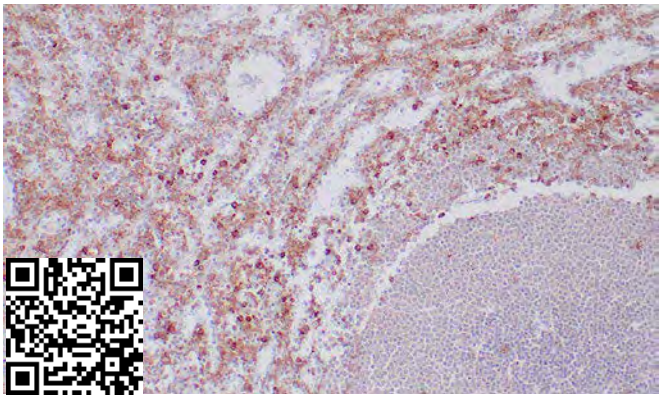


NEW CD33 (clone PWS44) IVD; RUO(EU)

CD33 plays a role in cell-cell interactions, signaling, and modulation of immune cell function. All cases of myeloid sarcoma in this study showed anti-CD33 positivity in the myeloid and monocytic subsets, allowing for easy interpretation. The excellent sensitivity and specificity for myelomonocytic lineage makes this anti-CD33 a useful diagnostic marker for myeloid sarcoma. In addition, this anti-CD33 may be useful... (more)

Species: Mouse Monoclonal **Cat#:** Z2232

IHC: Human spleen stained with PWS44

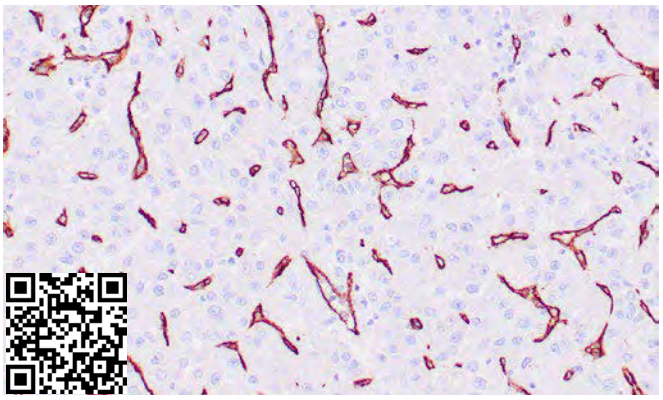


CD34 (clone QBEnd-10) IVD

CD34, a single chain transmembrane glycoprotein, is selectively expressed on human lymphoid and myeloid hematopoietic progenitor cells. Staining for CD34 has been used to measure angiogenesis, which reportedly predicts tumor recurrence.

Species: Mouse Monoclonal **Cat#:** Z2063

IHC: Human thyroid tissue stained with QBEnd-10

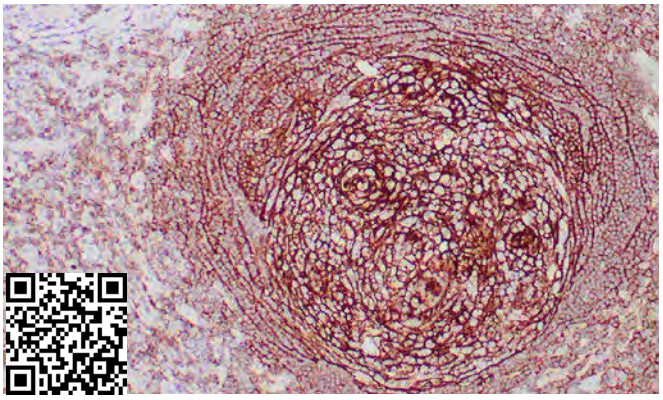


CD35 (clone ZR58) IVD

CD35 serves as the cellular receptor for C3b and C4b, the essential components of the complement system leading to clearance of foreign macromolecules. CD35 antigen is found on erythrocytes, B cells, a subset of T cells, monocytes, as well as eosinophils and neutrophils. Anti-CD35 is considered a mature B-cell marker that labels follicular dendritic reticulum cells and tumors derived from cells such as follicular dendritic cell tumor/sarcoma.

Species: Rabbit Monoclonal **Cat#:** Z2368

IHC: Human tonsil stained with ZR58

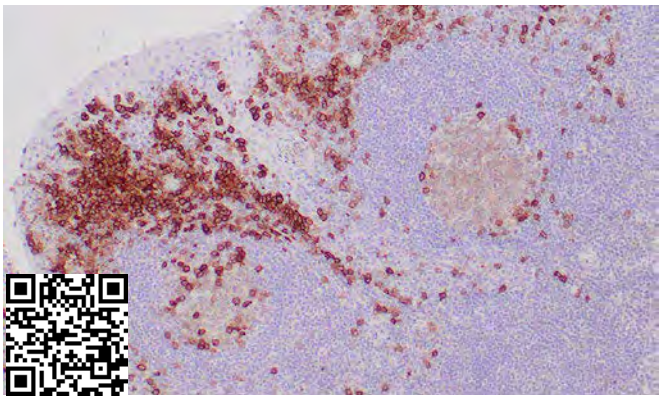


CD38 (clone ZR351) IVD

CD38 is a transmembrane protein that is highly expressed on thymocytes. It is also present on activated T-cells and terminally differentiated B-cells (plasma cells). Other reactive cells include NK cells, monocytes, macrophages and dendritic cells. CD38 may be detected on cells from multiple myeloma, ALL (B and T) and some AML.

Species: Rabbit Monoclonal **Cat#:** Z2610

IHC: Human tonsil stained with ZR351

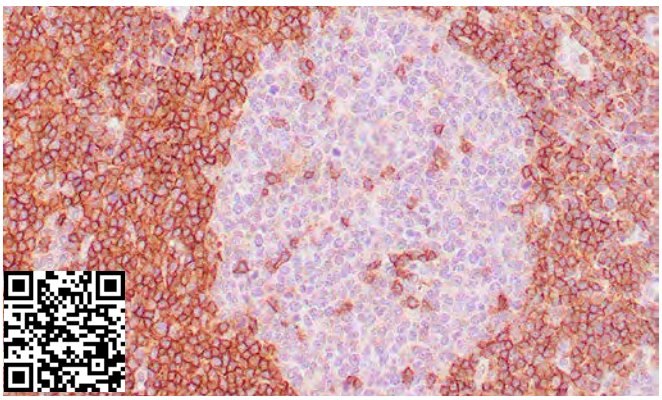


CD43 (clone DF-T1) IVD

CD43 (leukosialin, sialophorin, or leukocyte sialoglycoprotein) is a cell surface glycoprotein which is expressed on all thymocytes and T-cells. CD43 is involved in activation of T cells, B cells, NK cells, and monocytes.

Species: Mouse Monoclonal **Cat#:** Z2032

IHC: Human lymph node stained with DF-T1

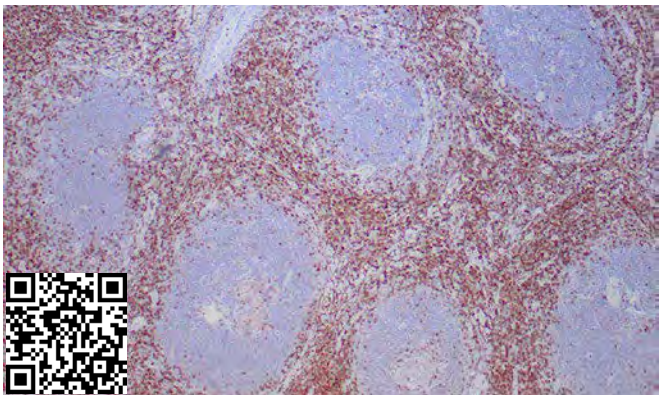


CD43 (clone ZR403) IVD; RUO(EU)

It recognizes a cell surface glycoprotein of 95/115/135kDa (depending upon the extent of glycosylation), identified as CD43. 70-90% of T-cell lymphomas and 22-37% of B-cell lymphomas express CD43. No reactivity has been observed with reactive B-cells. So, a B-lineage population co-expresses CD43 is highly likely to be a malignant lymphoma, especially a low-grade lymphoma, rather than a reactive B-cell population. (more)

Species: Rabbit Monoclonal **Cat#:** Z2759

IHC: Human tonsil stained with ZR403

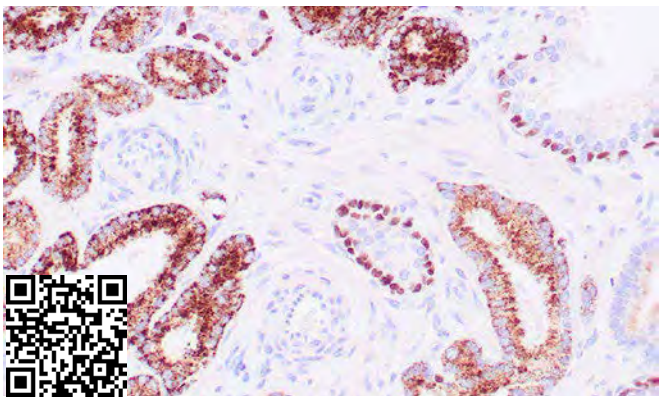


CD44 (clone ZR184) IVD

This MAb selectively interferes with lymphocyte binding to lymph node, mucosal and synovial endothelium. The CD44 family of glycoproteins exists in a number of variant isoforms, the most common being the standard 85-95kDa or hematopoietic variant (CD44s). CD44 immunostaining is commonly used for the discrimination of urothelial transitional cell carcinoma in-situ from non-neoplastic changes in the urothelium. (more)

Species: Rabbit Monoclonal **Cat#:** Z2679

IHC: Human squamous cell carcinoma stained with ZR184

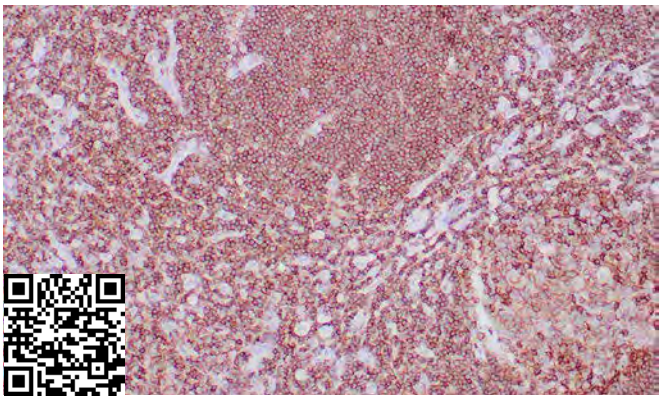


CD45 (LCA) (clone ZR361) IVD

Antibody to CD45 is useful in the differential diagnosis of lymphoid tumors from non-hematopoietic undifferentiated neoplasms. CD45R, also designated CD45 and PTPRC, has been identified as a transmembrane glycoprotein, broadly expressed among hematopoietic cells. According to cell type, multiple isoforms of CD45R are distributed throughout the immune system. These isoforms arise because of alternative splicing of exons 4, 5, and 6. CD45R functions as a phosphor-tyrosine phosphatase.

Species: Rabbit Monoclonal **Cat#:** Z2737

IHC: Human lymph node stained with ZR361

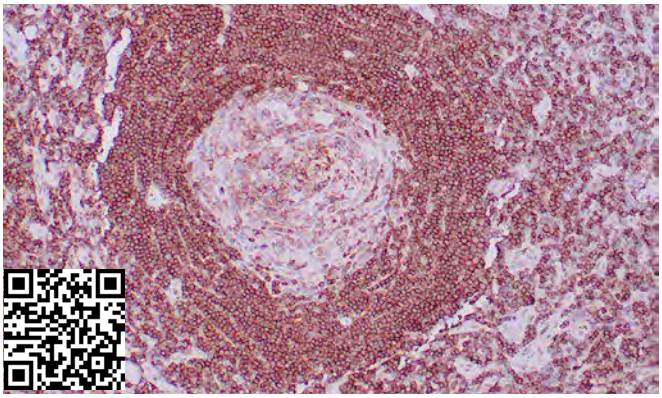


CD45RA (clone ZR118) IVD

CD45 is a family of single-chain transmembrane glycoproteins, consisting of at least four isoforms that share a common large intracellular domain. Detected in most haematolymphoid neoplasms, i.e., leukemias and malignant lymphomas. Overall, about 90% of malignant lymphomas are CD45 positive. CD45 is an essential marker in the primary tumor screening panel to identify haematolymphoid differentiation. Loss of CD45 in precursor B-cell neoplasms is a negative prognostic parameter.

Species: Rabbit Monoclonal **Cat#:** Z2681

IHC: Human lymph node stained with ZR118

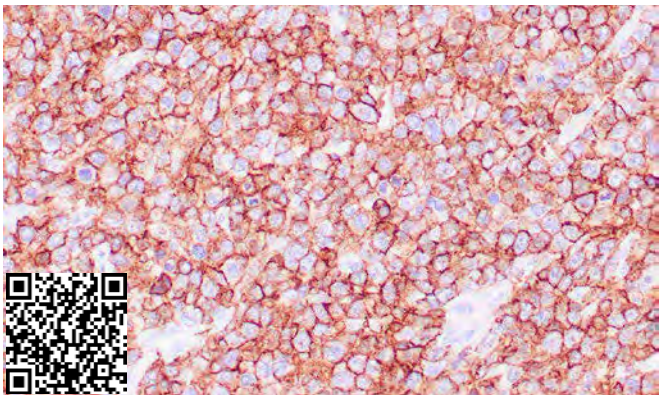


CD45RB (LCA) (clone 2B11+PD7/26) IVD

CD45 leukocyte common antigen (LCA) belongs to the family of at least four isoforms of membrane glycoproteins expressed on hematopoietic cell lines but absent on non-hematopoietic cell lines, normal and malignant non-hematopoietic tissues. Antibodies to CD45 are useful in differential identification of lymphoid tumors from non-hematopoietic undifferentiated neoplasms. (more)

Species: Mouse Monoclonal **Cat#:** Z2093

IHC: Diffuse large B cell lymphoma stained with 2B11+PD7/26

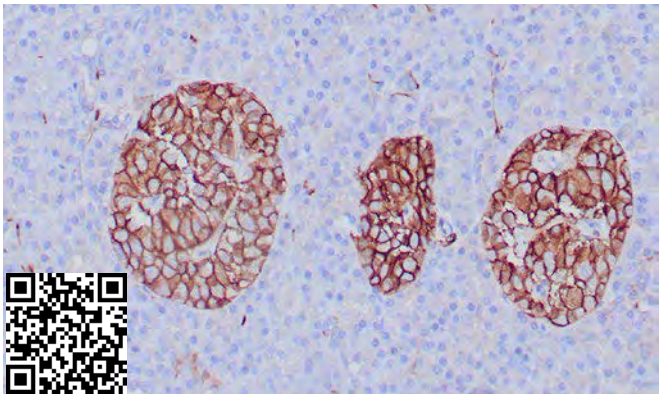


CD56 (clone ZR421) IVD; RUO(EU)

Reacts with an extracellular domain (close to the transmembrane) of CD56/NCAM. Three isoforms of neural cell adhesion molecule (NCAM) are produced by differential splicing of the RNA transcript from a single gene. The 135kDa isoform is the basic molecule, which is glycosylated or sialylated to produce the mature species. Anti-CD56 recognizes two proteins of the neural cell adhesion molecule, the basic molecule expressed on most neuroectodermally derived tissues and neoplasms (e.g. retinoblastoma, medulloblastomas, astrocytomas, neuroblastomas ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2777

IHC: Human neuroendocrine carcinoma stained with ZR421

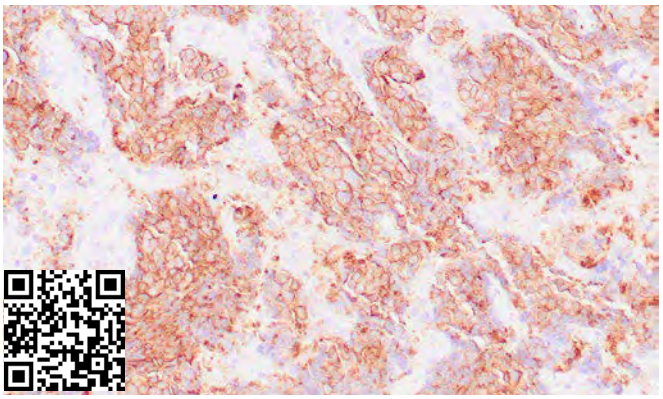


CD56 (clone 123C3.D5) IVD

Three isoforms of neural cell adhesion molecule CD56 (NCAM) are produced by differential splicing of the RNA transcript from a single gene. CD56 is reported to express on most neuroectodermal derived cell lines, tissues, and neoplasms such as retinoblastoma, medulloblastoma, astrocytoma, and neuroblastoma. It is also expressed on some mesodermally derived tumors such as rhabdomyosarcoma and also on natural killer cells. (more)

Species: Mouse Monoclonal **Cat#:** Z2038

IHC: Human neuroendocrine carcinoma stained with 123C3.5

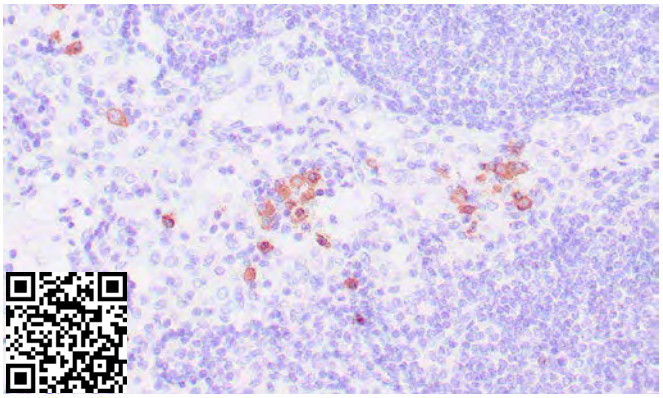


CD57 (clone NK-1) IVD

CD57 is expressed on a subpopulation of 15-20% of peripheral blood mononuclear cells, about 60% of NK active cells and on a subset of T cells. Clone NK1 marks a subset of lymphocytes known as natural killer (NK) cells. Clone NK1 also reacts with a variety of cell types in non-lymphoid tissues. It stains neuroendocrine cells and their tumors.

Species: Mouse Monoclonal **Cat:** Z2111

IHC: Human tonsil stained with NK-1

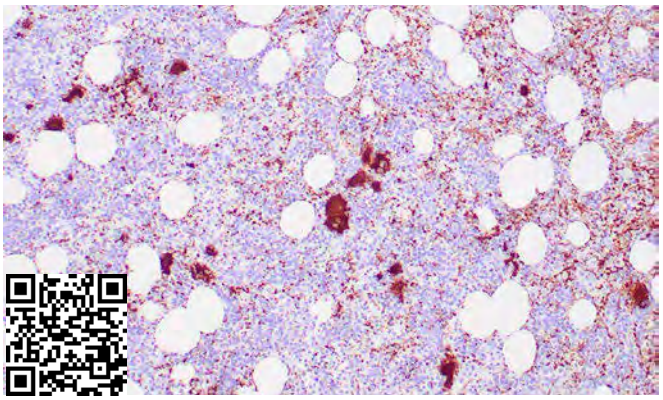


CD61 (clone ZM33) IVD

CD61 (GPIIIa) is a glycoprotein found on megakaryocytes, platelets and their precursors. CD61 antigen plays a role in platelet aggregation and also as a receptor for fibrinogen, fibronectin, von Willebrand factor and vitronectin. Clone ZM33 will prove useful in detecting neoplastic platelet precursors, normal platelets and most cases of megakaryocytic leukemia.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2337

IHC: Human bone marrow stained with ZM33

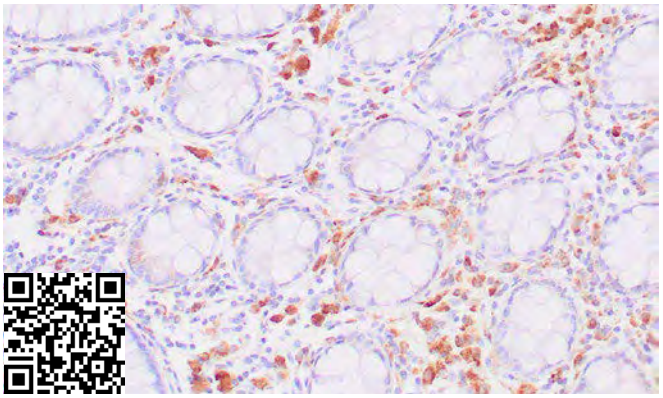


CD68 (clone KP1) IVD

CD68 is expressed on macrophages and monocytes. KP-1 is important for identifying macrophages in tissue sections. It stains macrophages in a wide variety of human tissues, including Kupffer cells and macrophages in the red pulp of the spleen, in lamina propria of the gut, in lung alveoli, and in bone marrow. KP-1 reacts with myeloid precursors and peripheral blood granulocytes. It also reacts with plasmacytoid T cells which... (more)

Species: Mouse Monoclonal **Cat#:** Z2071

IHC: Human colon stained with KP1

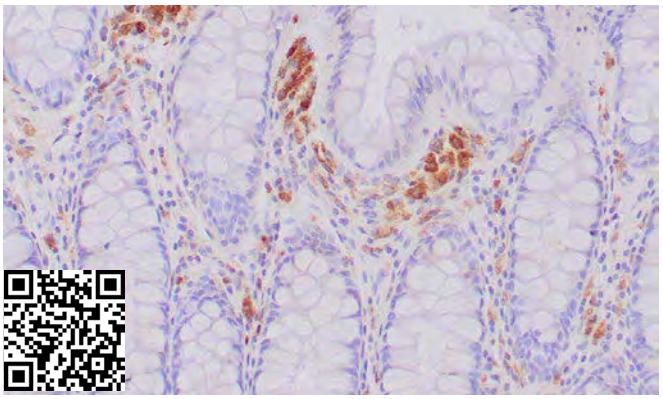


CD68 (clone ZR302) IVD

This MAb reacts with myeloid precursors and peripheral blood granulocytes. It also reacts with plasmacytoid T cells, which are supposed to be of monocyte/macrophage origin. It shows strong granular cytoplasmic staining of chronic and acute myeloid leukemia and also reacts with rare cases of true histiocytic neoplasia. Lymphomas are negative or show few granules. (more)

Species: Mouse Monoclonal **Cat:** Z2732

IHC: Human colon stained with ZR302

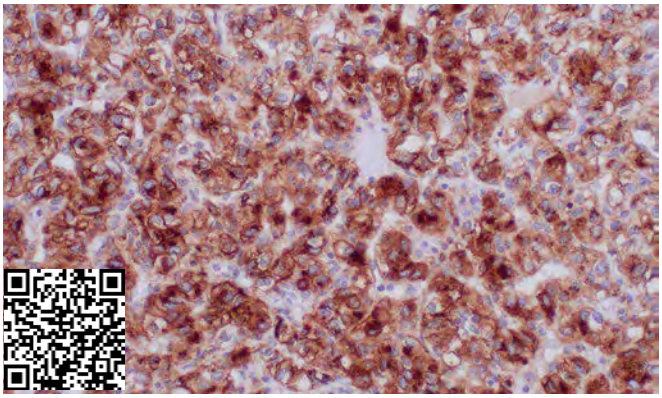


NEW CD70 (clone ZR469) IVD; RUO(EU)

Recognizes a protein of 30kDa, identified as CD70. This cytokine is a ligand for TNFRSF27/CD27. It is a surface antigen on activated, but not on resting, T- and B-lymphocytes. It induces the proliferation of co-stimulated T cells, enhances the generation of cytolytic T cells, and contributes to T cell activation. This cytokine is also reported to regulate B-cell activation, the cytotoxic function of natural killer cells, and immunoglobulin synthesis. (more)

Species: Rabbit Monoclonal **Cat:** Z2829

IHC: Clear cell renal cell carcinoma stained with ZR469

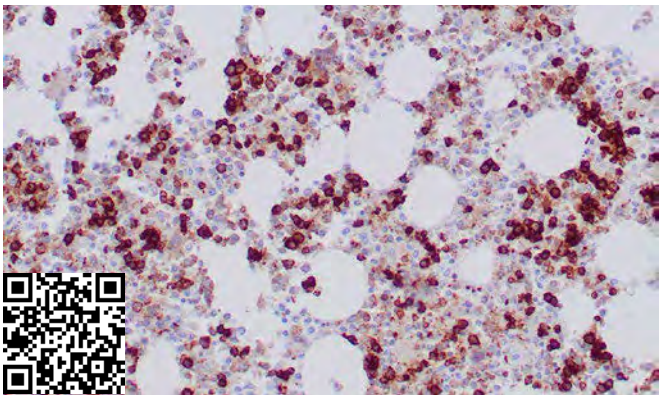


CD71 (clone ZR422) IVD; RUO(EU)

Recognizes a ~90-95kDa protein identified as cell surface transferrin receptor (CD71), a disulfide-bonded homodimeric glycoprotein of 180-190kDa (Workshop IV). This MAb is highly specific to CD71 and shows no cross-reaction with other related proteins. Ligand for transferrin receptor is the serum iron transport protein, transferrin. This receptor is broadly distributed in carcinomas, sarcomas, leukemias, and lymphomas. CD71/Transferrin receptor has been reported to be associated with cell proliferation... (more)

Species: Rabbit Monoclonal **Cat#:** Z2778

IHC: Bone marrow stained stained with ZR422

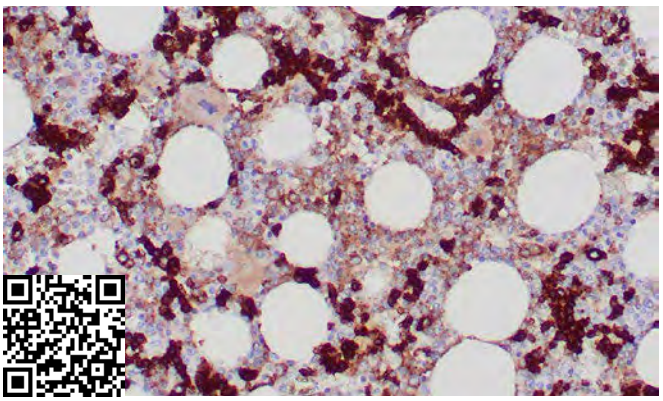


CD71 (clone ZM136) IVD

Recognizes ~90-95kDa cell surface transferrin receptor (CD71) and is is highly specific for CD71 and shows no cross-reaction with other related proteins. Ligand for transferrin receptor is the serum iron transport protein, transferrin. This receptor is broadly distributed in carcinomas, sarcomas, leukemias, and lymphomas. CD71/Transferrin receptor has been reported to be associated with cell proliferation in both normal and neoplastic tissues and helpful in predicting clinical... (more)

Species: Mouse Monoclonal **Cat#:** Z2685

IHC: Human bone marrow stained with ZM136

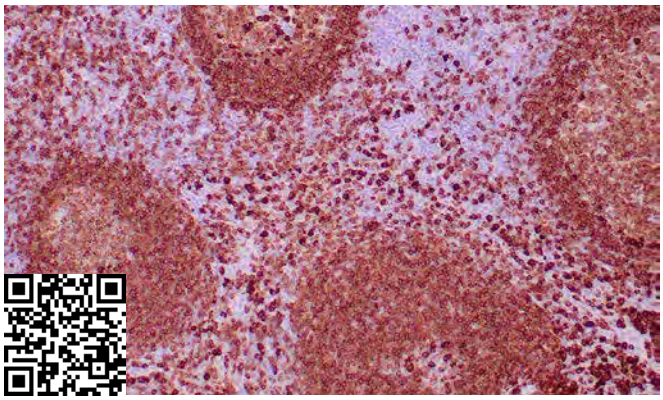


CD79a (clone ZR237) IVD

A disulfide-linked heterodimer, consisting of CD79a / mb-1 and CD79b / B29 polypeptides, is non-covalently associated with membrane-bound immunoglobulins on B cells to constitute the B cell Ag receptor. CD79a is found in the majority of acute leukemias of precursor B cell type, in B cell lines, B cell lymphomas, and in some myelomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2533

IHC: Human tonsil stained with ZR237

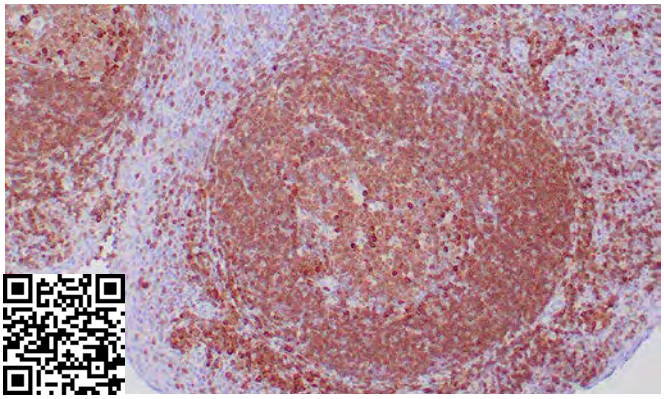


CD79a (clone JCB117) IVD

A disulfide-linked heterodimer, consisting of CD79a / mb-1 and CD79b / B29 polypeptides, is non-covalently associated with membrane-bound immunoglobulins on B cells to constitute the B cell Ag receptor. CD79a is found in the majority of acute leukemias of precursor B cell type, in B cell lines, B cell lymphomas, and in some myelomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2427

IHC: Human tonsil stained with JCB117

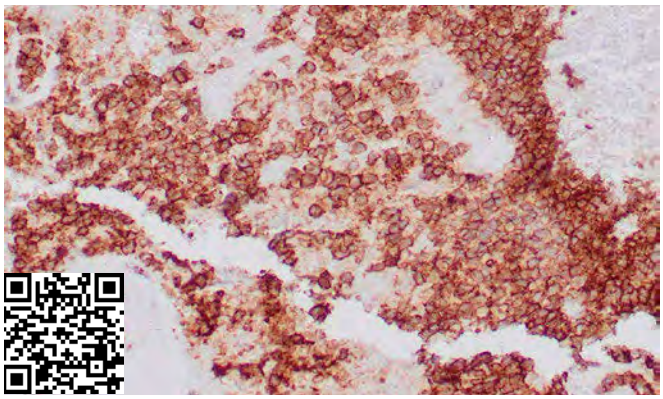


CD99 (clone ZR423) IVD; RUO(EU)

Recognizes a sialoglycoprotein of 27-32kDa, identified as CD99, or MIC2 gene product, or E2 antigen. MIC2 gene is located in the pseudo-autosomal region of the human X and Y chromosome. MIC2 gene encodes two distinct proteins, which are produced by alternative splicing of the CD99 gene transcript and are identified as bands of 30 and 32kDa (p30/32). Although its function is not fully understood, CD99 is implicated in various cellular processes including homotypic aggregation of T cells, upregulation... (more)

Species: Rabbit Monoclonal **Cat#:** Z2779

IHC: Human Ewing sarcoma stained stained with ZR423

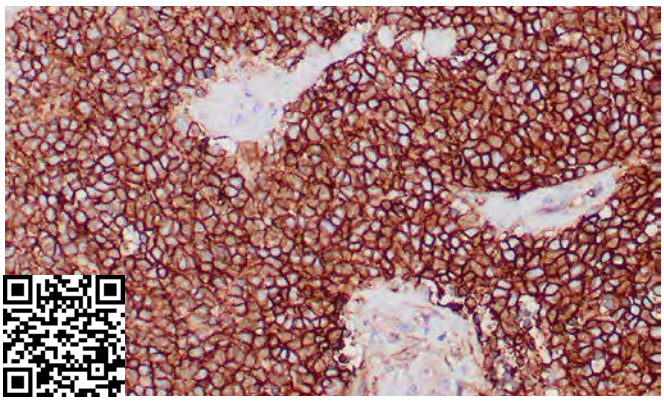


CD99 (clone ZM139) IVD

Recognizes a sialoglycoprotein of 27-32kDa, identified as CD99, or MIC2 gene product, or E2 antigen. Implicated in various cellular processes including homotypic aggregation of T cells, upregulation of T cell receptor and MHS molecules, apoptosis of immature thymocytes and leukocyte diapedesis. Most pancreatic islet cells, Sertoli cells of the testis, and some endothelial cells express this antigen. Strongly expressed on Ewing's sarcoma cells and peripheral neuroectodermal tumors. (more)

Species: Mouse Monoclonal **Cat#:** Z2686

IHC: Human Ewing's sarcoma stained with ZM139



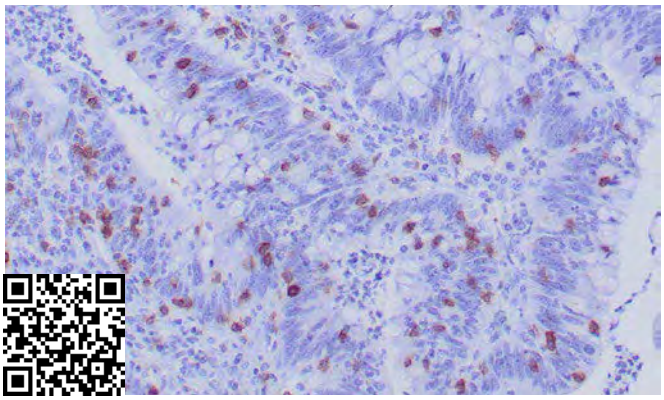
CD103 (clone ZR404)

IVD; RUO(EU)

Recognizes 150kDa CD103 and is expressed on more than 95% of intraepithelial CD8+ cells and 40% of mucosa-associated T cells, whereas less than 2% of resting blood lymphocytes are CD103-positive. In several malignant conditions, such as T-cell lymphomas and hairy cell leukemia (HCL), the cells express CD103. Antibody to CD103 is an extremely useful addition to the IHC panel for diagnosing hairy cell leukemia (HCL). (more)

Species: Mouse Monoclonal **Cat#:** Z2760

IHC: Human colon carcinoma stained with ZR404



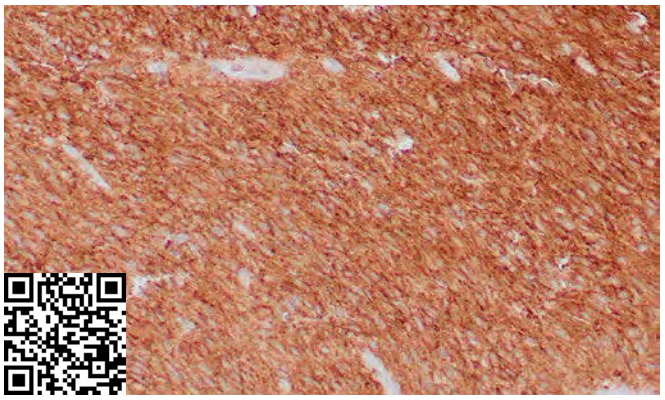
CD117 (clone ZR424)

IVD; RUO(EU)

Recognizes a protein of 145kDa, identified as CD117/p145kit. It is found on a wide variety of tumor cells including follicular and papillary carcinoma of the thyroid, adenocarcinomas from endometrium, lung, ovary, pancreas, and breast as well as malignant melanoma, endodermal sinus tumor, and small cell carcinoma. However, anti-CD117 has been particularly useful in differentiating gastrointestinal stromal tumors from Kaposi sarcoma, tumors of smooth muscle origin, fibromatosis, and neural tumors .... (more)

Species: Rabbit Monoclonal **Cat#:** Z2780

IHC: Human GIST stained stained with ZR424



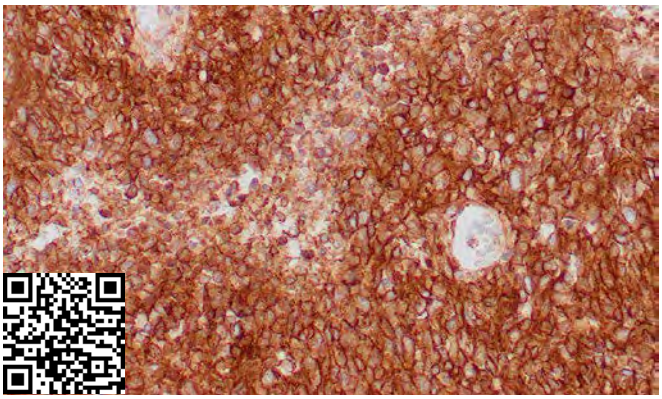
CD117 (clone ZM321)

ASR (US)/IVD (International)

Recognizes CD117/p145kit and is found on a variety of tumor cells including follicular and papillary carcinoma of the thyroid, adenocarcinomas from endometrium, lung, ovary, pancreas, and breast as well as malignant melanoma, endodermal sinus tumor, and small cell carcinoma. However, anti-CD117 is useful in differentiating gastrointestinal stromal tumors from Kaposi's sarcoma, tumors of smooth muscle origin, fibromatosis, and neural tumors of the GI tract. (more)

Species: Mouse Monoclonal **Cat#:** Z2628

IHC: Human GIST stained with ZM321



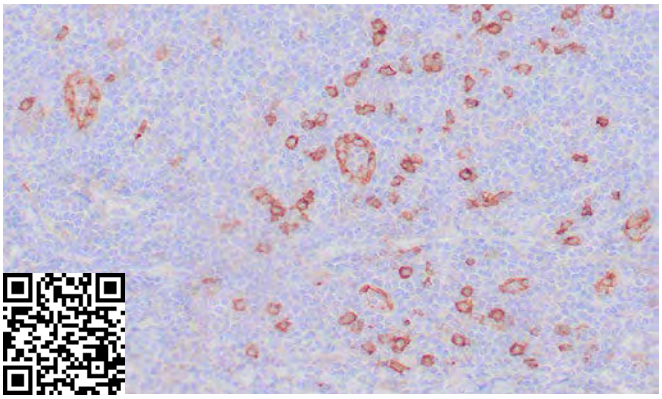
CD123 (clone ZR425)

IVD; RUO(EU)

CD123 is an interleukin 3 specific subunit of a heterodimeric cytokine receptor. The receptor is comprised of a ligand specific alpha subunit and a signal transducing beta subunit shared by the receptors for interleukin 3 (IL3), colony stimulating factor 2 (CSF2/GM-CSF), and interleukin 5 (IL5). The binding of this protein to IL3 depends on the beta subunit. The beta subunit is activated by the ligand binding, and is required for the biological activities of IL3. This gene and the gene encoding the colony stimulating... (more)

Species: Rabbit Monoclonal **Cat#:** Z2781

IHC: Human tonsil stained with ZR425

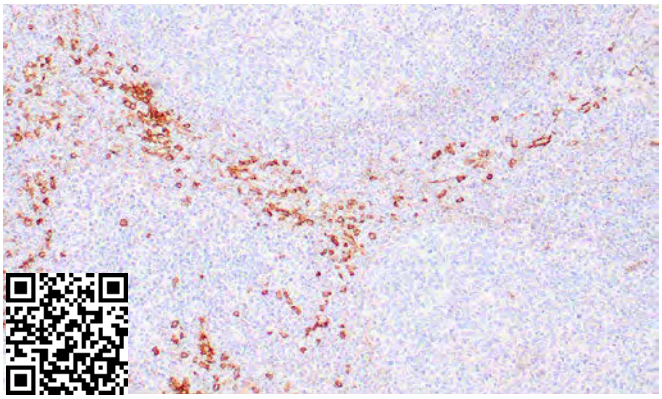


CD123 (clone ZM80) IVD

CD123, the 70 kd IL-3R chain is expressed on hematopoietic progenitors and plays an important role in hematopoietic progenitor cell growth and differentiation. This antibody has been reported to block the binding of 125I-IL-3 to high and low affinity IL-3 receptors. In functional experiments, this antibody was found to inhibit acute myeloid leukemia cell proliferation, basophil histamine release, endothelial cell-mediated IL-8... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2390

IHC: Human tonsil stained with ZM80

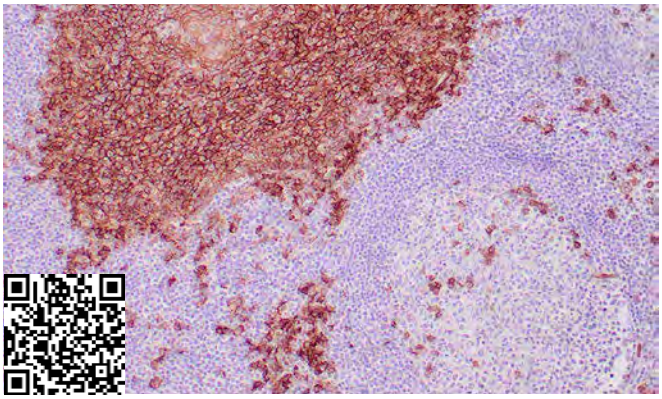


CD138 (clone ZR251) IVD

CD138, also designated syndecan-1. The syndecans' main functions are to control cell growth and differentiation as well as to maintain cell adhesion and cell migration. Under normal conditions CD138 is predominantly expressed on mature plasma cells and early preB-cells, while other haematolymphoid cells are negative. CD138 is expressed in practically all cases of plasma cell malignancies and various non-haematolymphoid types of carcinomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2490

IHC: Human tonsil stained with ZR251

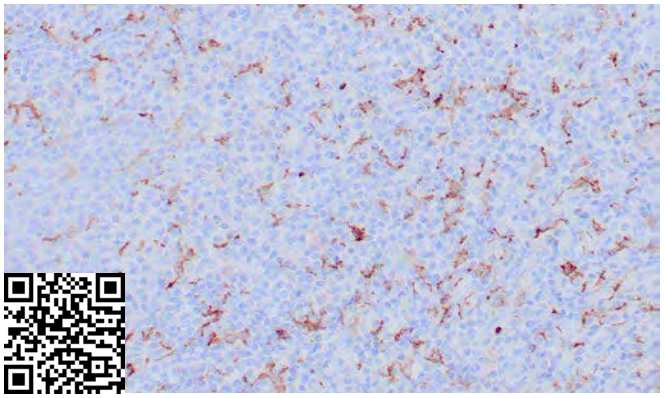


CD163 (clone ZR426) IVD; RUO(EU)

This MAb recognizes a protein of 140kDa, identified as CD163. It has been identified as an acute phase-regulated transmembrane protein whose function is to mediate the endocytosis of haptoglobin-hemoglobin complexes. This receptor is expressed on the surface of monocytes with low expression and on tissue macrophages, histiocytes with high expression. Staining with anti-CD163 has been helpful to distinguish synovial macrophages from synovial intimal fibroblasts in rheumatoid arthritis, where its... (more)

Species: Rabbit Monoclonal **Cat#:** Z2782

IHC: Human lymph node stained stained with ZR426

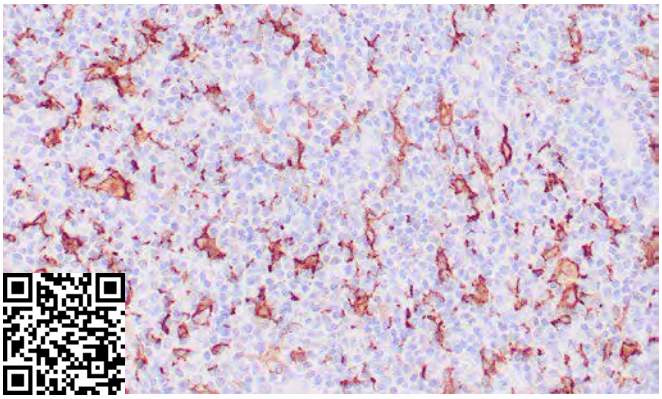


CD163 (clone ZM29) IVD

Staining with anti-CD163 has been helpful to distinguish synovial macrophages from synovial intimal fibroblasts in rheumatoid arthritis, where its specificity for macrophages was found to be superior to that of anti-CD68. Increased levels of CD163 were also detected in patients with microbial infections and myelomonocytic leukemias. Anti-CD163 is of considerable value for selective identification of monocytes and... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2361

IHC: Human lymph node stained with ZM29

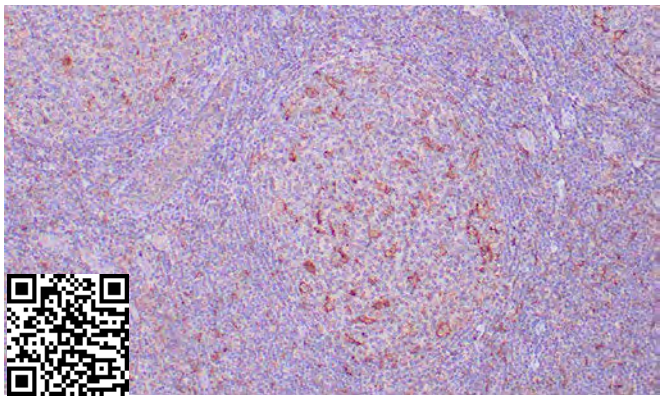


CD205 (clone ZM360) IVD

DEC-205 (LY75, lymphocyte antigen 75, GP200-MR6) is a 1,695 residue (mature form) multi-lectin receptor belonging to the MMR (macrophage mannose receptor) family of multidomain molecules. MMRs mediate membrane receptor targeting endosomes or lysosomes rich in major histocompatibility complex class II (MHC II) products. Expressed in mature dendritic cells (DC), DEC-205 contains an extracellular N-terminal cysteine-rich domain, a fibronectin type II domain, ... (more)

Species: Mouse Monoclonal **Cat#:** Z2736

IHC: Human tonsil stained with ZM360

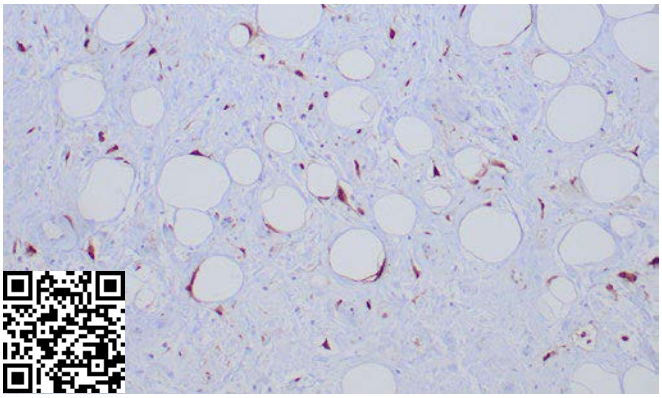


CDK4 (clone ZR394) IVD; RUO(EU)

CDK4 is a protein-serine kinase involved in the cell cycle and is highly expressed in highly differentiated and dedifferentiated liposarcomas but rarely expressed in other benign liposarcomas and other sarcomas. CDK4 and MDM2 combined to differentiate between highly differentiated liposarcoma (+), dedifferentiated liposarcoma (+), and myxoid liposarcoma, pleomorphic liposarcoma, spindle lipoma, pleomorphic lipoma, and... (more)

Species: Rabbit Monoclonal **Cat:** Z2750

IHC: Human liposarcoma stained with ZR394

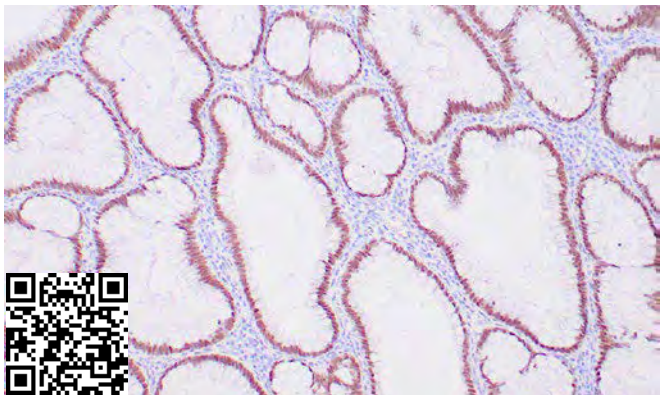


CDX2 (clone ZR215) IVD

CDX2 protein expression is seen in GI carcinomas. Anti-CDX2 is useful to establish GI origin of metastatic adenocarcinomas and carcinoids and can distinguish between metastatic colorectal- and lung adenocarcinomas. However, mucinous carcinomas of the ovary also express CDX2 protein. It limits the usefulness of this marker in the distinction of metastatic colorectal adenocarcinoma from mucinous carcinoma of the ovary. (more)

Species: Rabbit Monoclonal **Cat#:** Z2494

IHC: Human colon adenocarcinoma stained with ZR215

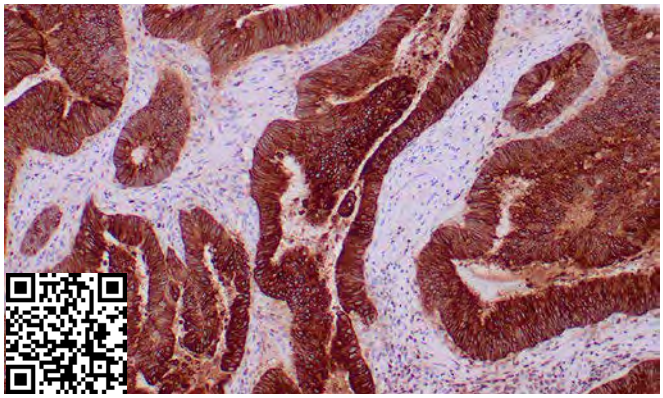


CEACAM5 (clone ZR370) IVD

This MAb does not react with nonspecific cross-reacting antigen (NCA) and with human polymorphonuclear leucocytes. It shows no reaction with a variety of normal tissues and is suitable for staining of formalin/paraffin tissues. CEACAM5 is not found in benign glands, stroma, or malignant prostatic cells. Antibody to CEA is useful in detecting early foci of gastric carcinoma and in distinguishing pulmonary adenocarcinomas... (more)

Species: Rabbit Monoclonal **Cat#:** Z2661

IHC: Human colon carcinoma stained with ZR370

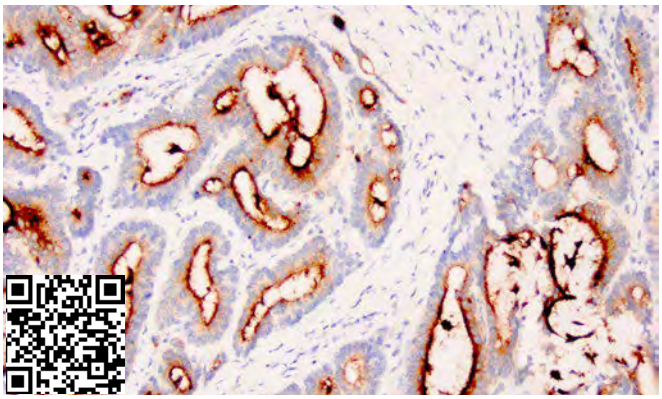


CEA-M (clone CEA31) IVD

Clone CEA31 has a high affinity for CEA and shows no detectable reactivity to nonspecific cross-reacting antigen (NCA), biliary glycoprotein (BGP).and human polymorphonuclear leucocytes. CEA31 is useful in detecting early foci of gastric carcinoma and in distinguishing pulmonary adenocarcinomas (60-70% are CEA+) from pleural mesotheliomas (rarely or weakly CEA+). (more)

Species: Mouse Monoclonal **Cat#:** Z2100

IHC: Human colon carcinoma stained with CEA31

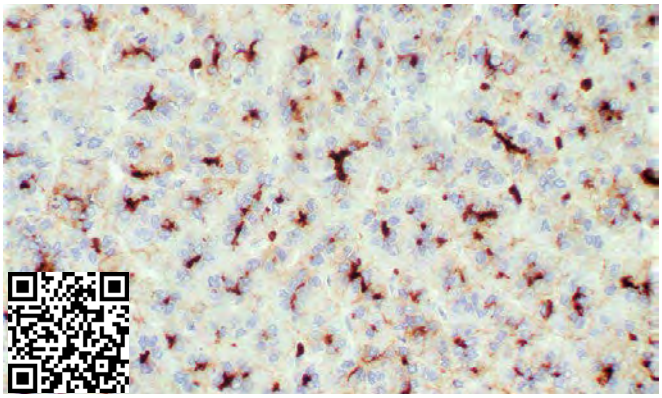


CEA-P (polyclonal) IVD

Assists in the distinction between adenocarcinoma and epithelioid malignant mesotheliomas, to immunophenotype various metastatic adenocarcinomas as a means of identifying their origin within a panel of different markers and is in staining hepatocellular carcinoma in a canalicular pattern. Anti-CEA positivity is seen in adenocarcinomas from the lung, colon, stomach, esophagus ... (more)

Species: Rabbit Polyclonal **Cat:** Z2565

IHC: Human liver stained with anti-CEA polyclonal antibody

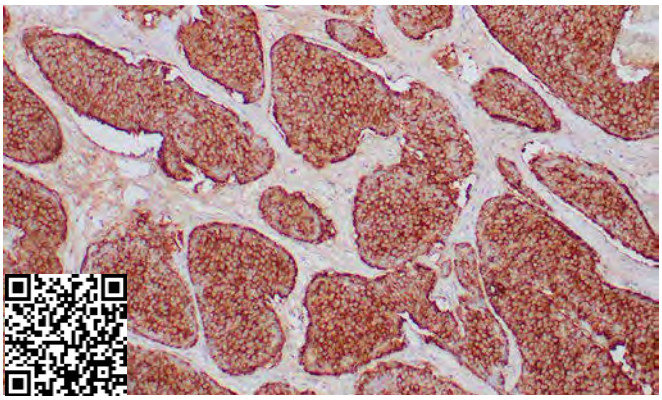


Chromogranin A (clone ZR427) IVD; RUO(EU)

Chromogranin A is present in neuroendocrine cells throughout the body, including the neuroendocrine cells of the large and small intestine, adrenal medulla and pancreatic islets. It is an excellent marker for carcinoid tumors, pheochromocytomas, paragangliomas, and other neuroendocrine tumors. Co-expression of chromogranin A and neuron specific enolase (NSE) is common in neuroendocrine neoplasms. Reportedly, co-expression of certain keratins and chromogranin indicates neuroendocrine... (more)

Species: Rabbit Monoclonal **Cat#:** Z2783

IHC: Human neuroendocrine tumor stained with ZR427

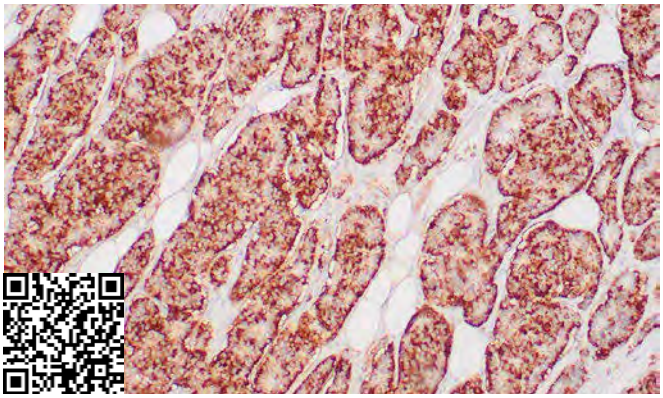


Chromogranin A (clone ZM12) IVD

Chromogranin A is an excellent marker for carcinoid tumors, pheochromocytomas, paragangliomas, and other neuroendocrine tumors. Co-expression of chromogranin A and neuron specific enolase (NSE) is common in neuroendocrine neoplasms. Reportedly, co-expression of certain keratins and chromogranin indicates neuroendocrine lineage. The presence of strong anti-chromogranin staining, and absence of ... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2347

IHC: Human neuroendocrine tumor stained with ZM12

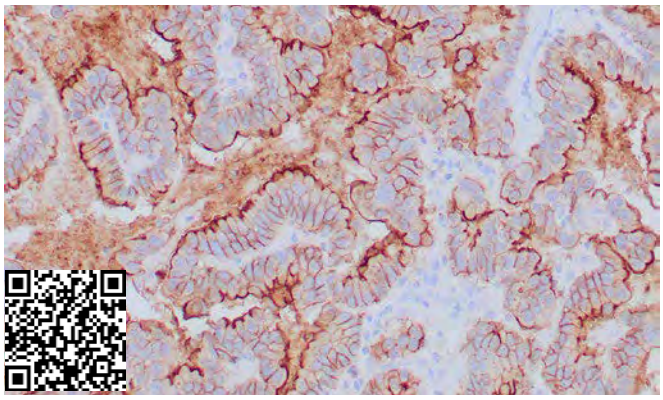


Claudin 18.2 (clone ZR451) IVD; RUO(EU)

Claudins are located in epithelial and endothelial cells in all tight junction-bearing tissues. Emerging evidence suggests that the claudin family of proteins regulates transport through tight junctions via differential discrimination for solute size and charge. Claudin expression is often highly restricted to specific regions of different tissues and may have an important role in transcellular transport through tight junctions. **(more)**

Species: Rabbit Monoclonal **Cat#:** Z2807

IHC: human gastric adenocarcinoma stained with ZR451

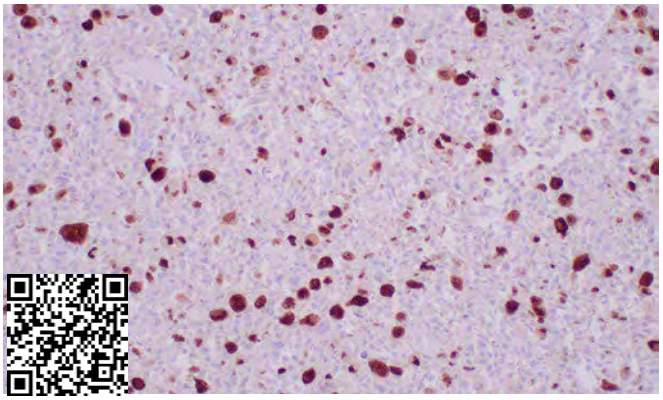


NEW CMV (clone ZR456) IVD; RUO(EU)

Cytomegalovirus (CMV) is an opportunistic pathogen infecting the lungs, kidneys, gut, and other organs in situations where an individual is immunologically immature, such as the fetus and neonate. Infection also occurs in immunosuppressed patients. Clone ZR456 IHC is used to detect CMV infection tissues. CMV p65 antigen was also detected in the leukocytes of the peripheral blood and BALF during the early phase of CMV disease. (more)

Species: Rabbit Monoclonal **Cat#:** Z2818

IHC: CMV infected tissue stained with ZR456

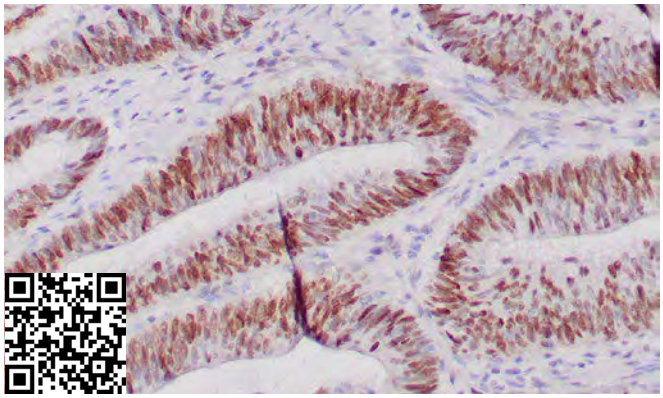


c-myc (clone ZR355) IVD

This MAb shows no cross-reaction with v-myc. c-myc is involved in the control of cell proliferation and differentiation and is amplified and/or overexpressed in a variety of tumors. Over-expression of c-myc protein occurs frequently in luminal cells of prostate intraepithelial neoplasia as well as in most primary carcinomas and metastatic disease.

Species: Rabbit Monoclonal **Cat#:** Z2734

IHC: Human colon adenocarcinoma stained with ZR355

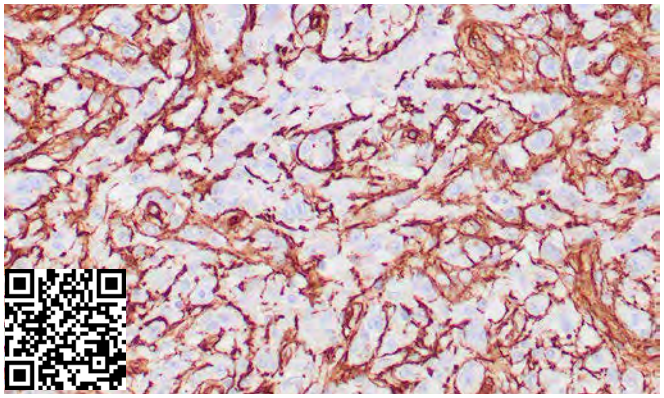


Collagen IV (clone ZR108) IVD

Collagen Type IV has been shown to be useful in differentiating microinvasive from *in situ* ductal carcinomas of the breast. Other Collagen Type IV studies include use in pancreatic adenocarcinoma and chronic pancreatitis, nephrosclerosis and other kidney diseases, oral squamous cell carcinoma, laryngeal cancers, ovarian cancers and cervical cancers. (more)

Species: Rabbit Monoclonal **Cat:** Z2410

IHC: Human glomus tumor stained with ZR108

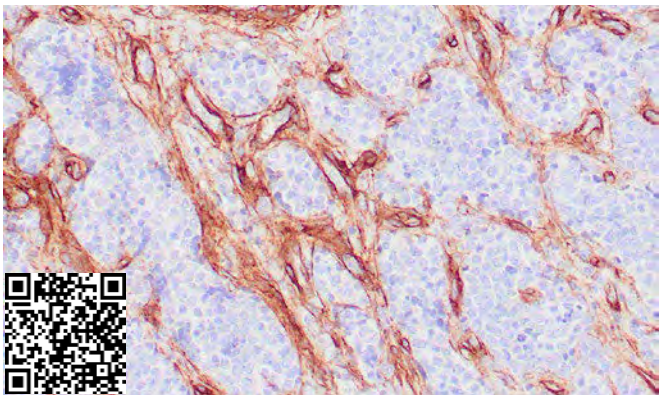


Collagen IV (clone ZM177) IVD

Collagen Type IV has been shown to be useful in differentiating microinvasive from *in situ* ductal carcinomas of the breast. Other Collagen Type IV studies include use in pancreatic adenocarcinoma and chronic pancreatitis, nephrosclerosis and other kidney diseases, oral squamous cell carcinoma, laryngeal cancers, ovarian cancers and cervical cancers. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2478

IHC: Human glomus tumor stained with ZM177

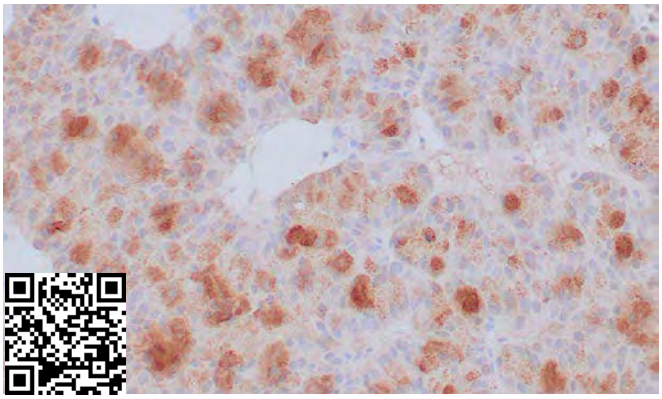


CPA1 (clone ZR450) IVD; RUO(EU)

CPA1 uses zinc as a cofactor to catalyze the release of C-terminal amino acids from a variety of proteins, thereby playing a key role in protein digestion and degradation. Via its catalytic activity, CPA1 is also thought to be involved in zymogen (proenzyme) inhibition, probably functioning to block enzyme activation pathways. Abnormal levels of CPA1 are associated with pancreatic cancer, suggesting a possible role in either tumor progression or tumor suppression events. **(more)**

Species: Rabbit Monoclonal **Cat#:** Z2806

IHC: Pancreatic acinar cell carcinoma stained with ZR450

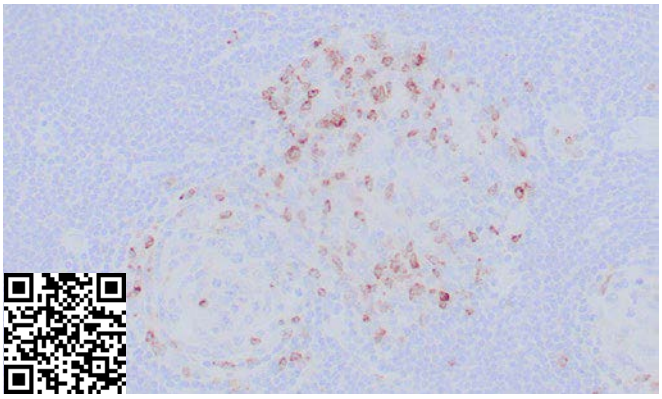


CTLA-4 (clone ZR452) IVD; RUO(EU)

CTLA-4 is a negative regulator of T cell-mediated immune responses. It is constitutively expressed in T-regulatory cells, acting as an immune checkpoint inhibitor and downregulating T-cell activity. CTLA-4 has been shown to play a role in human diseases. CTLA-4 acts as a physiological brake on the activated immune system to maintain immune homeostasis. Several suppressive mechanisms for T-cell functions have been attributed to CTLA-4. **(more)**

Species: Rabbit Monoclonal **Cat#:** Z2808

IHC: Human tonsil stained with ZR452

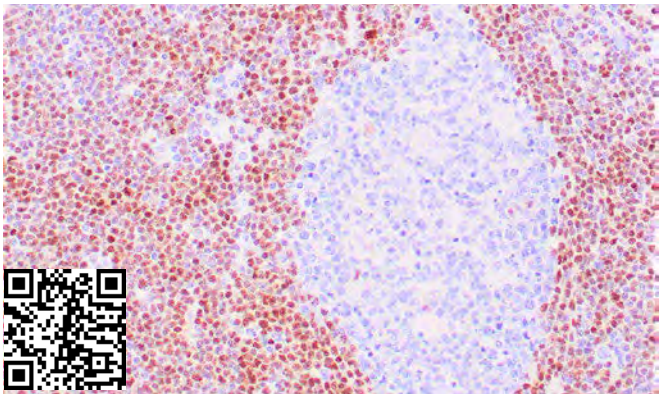


Cyclin D1 (clone ZR197) IVD

Cyclin D1is a putative proto-oncogene overexpressed in a wide variety of human neoplasms. This antibody neutralizes the activity of cyclin D1 *in vivo*. and is useful in identifying mantle cell lymphomas (cyclin D1 positive) from CLL/SLL and follicular lymphomas (cyclin D1 negative). Occasionally, hairy cell leukemia and plasma cell myeloma weakly express Cyclin D1. (more)

Species: Rabbit Monoclonal **Cat#:** Z2515

IHC: Human mantle cell lymphoma stained with ZR197

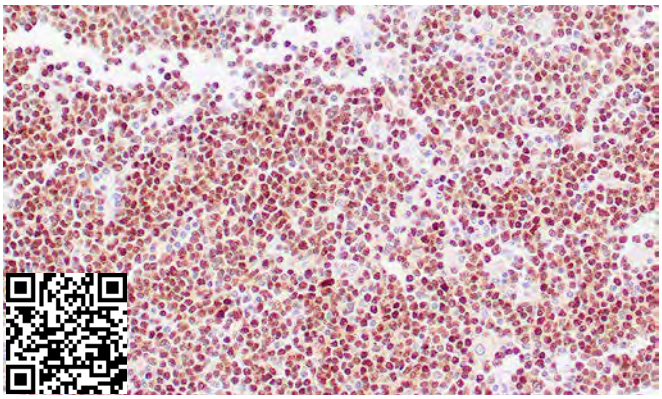


Cyclin D1 (clone ZM178) IVD

Cyclin D1is a putative proto-oncogene overexpressed in a wide variety of human neoplasms. This antibody neutralizes the activity of cyclin D1 *in vivo*. and is useful in identifying mantle cell lymphomas (cyclin D1 positive) from CLL/SLL and follicular lymphomas (cyclin D1 negative). Occasionally, hairy cell leukemia and plasma cell myeloma weakly express Cyclin D1. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2480

IHC: Human mantle cell lymphoma stained with ZM178

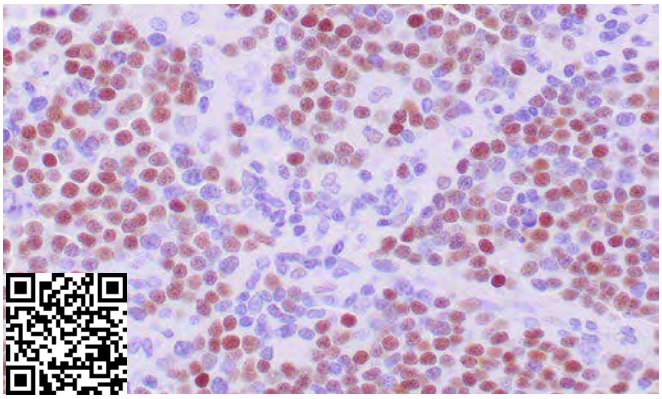


Cyclin-E (clone ZM121) IVD

Cyclins function as regulators of CDK kinases. Cyclin E forms a complex with and functions as a regulatory subunit of CDK2, whose activity is required for cell cycle G1/S transition. Cyclin E accumulates at the G1-S phase boundary and is degraded as cells progress through S phase. Cyclin E overexpression has been observed in many tumors, which results in chromosome instability, and thus may contribute to tumorigenesis. (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2431

IHC: Human colon carcinoma stained with ZM121

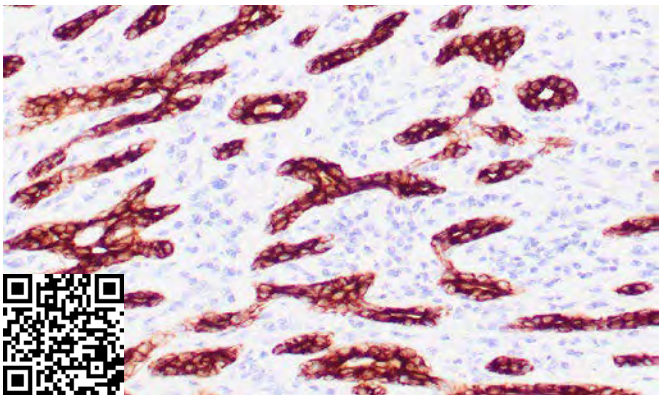


Cytokeratin (clone CAM 5.2) IVD

Anti-Cytokeratin (CAM 5.2) reagent has a primary reactivity with human keratin proteins that correspond to Moll`s peptides #7 and #8, MW 48 and 52 kDa, respectively. Anti-Cytokeratin (CAM 5.2) stains most epithelial-derived tissue, including liver, renal tubular epithelium, and hepatocellular and renal cell carcinomas. Anti-Cytokeratin (CAM 5.2) may not react with some squamous cell carcinomas.

Species: Mouse Monoclonal **Cat#:** Z2018

IHC: Human breast stained with CAM 5.2

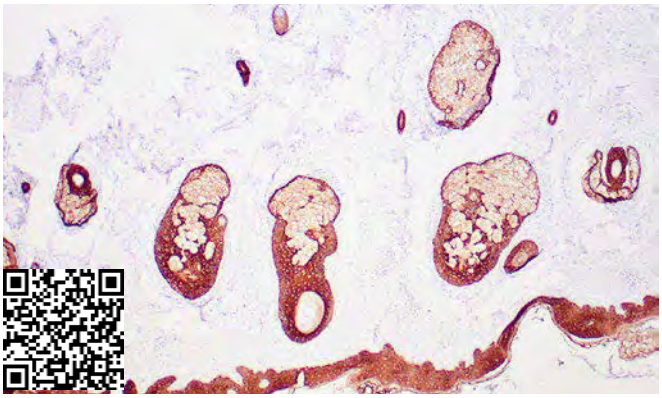


Cytokeratin, HMW (clone 34βE12) IVD

Cytokeratin 34βE12 antibody is a specific marker useful in differential identification of squamous carcinomas from adenocarcinomas and differential diagnosis of benign and malignant tumors of prostatic gland. In normal cells, it labels squamous, ductal and other complex epithelia. It reacts with benign small-acinar lesions of the prostate and does not react with hepatocytes, pancreatic acinar cells, proximal renal tubes or... (more)

Species: Mouse Monoclonal **Cat#:** Z2019

IHC: Human skin with carcinoma stained with 34βE12

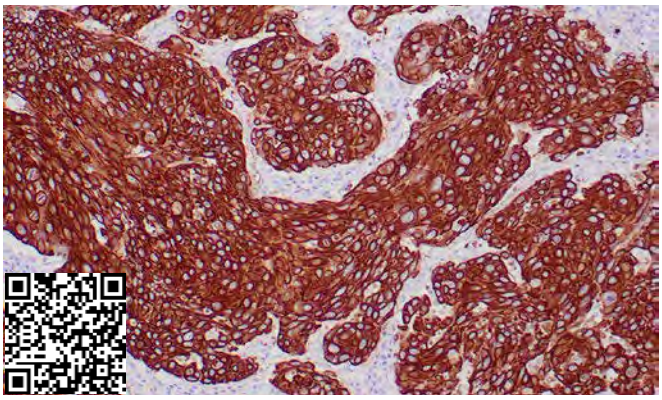


Cytokeratin, Pan (clone AE1/AE3) IVD

Many studies have shown the usefulness of keratins as markers in cancer research and tumor diagnosis. MAb AE1 recognizes the 56.5, 50, 50', 48, and 40kDa keratins of acidic subfamily, whereas the AE3 MAb reacts with the basic keratins of 65-67, 64, 59, 58, 56, and 52kDa. AE1/AE3 reacts with keratinized (56.5/65-67) and corneal (55/64) epidermis, stratified squamous epithelia of internal organs (51/59)... (more)

Species: Mouse Monoclonal **Cat#:** Z2061

IHC: Human infiltrating breast carcinoma stained with AE1/AE3

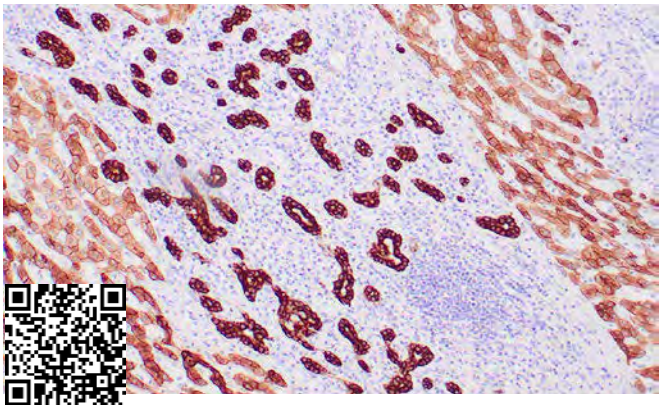


Cytokeratin, Pan (clone OSCAR) IVD

Anti-cytokeratin clone OSCAR (CK OSCAR) demonstrates a broad spectrum of cytokeratin reactivity. In normal tissues, OSCAR is reactive with most epithelial types. In tumors, OSCAR is reactive with most carcinomas, including breast, transitional cell (TCC), renal cell (RCC), lung adenocarcinoma, lung small cell, lung squamous cell, endometrial, prostate, ovarian, hepatocellular (HCC), colorectal CA, stomach... (more)

Species: Mouse Monoclonal **Cat:** Z2539

IHC: Human liver stained with anti-pan cytokeratin OSCAR

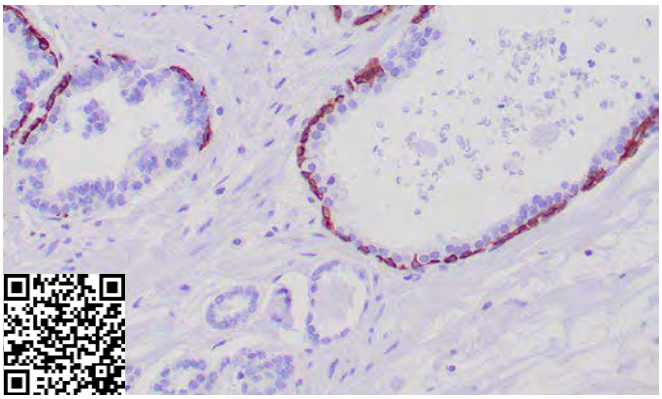


Cytokeratin 5 (clone ZR280) IVD

Mutations KRT5 have been shown to result in the autosomal dominant disorder epidermolysis bullosa (EB). Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. Cytokeratins have been found to be useful markers of tissue differentiation, which is directly applicable to the characterization of malignant tumors. (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2595

IHC: Human prostate stained with ZR280

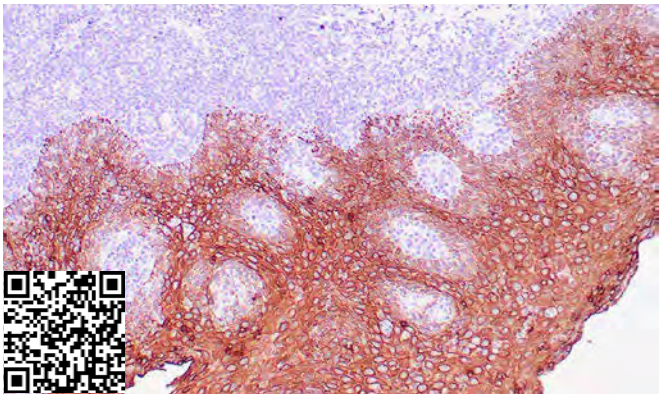


Cytokeratin 5 (clone ZM186) IVD

Mutations KRT5 have been shown to result in the autosomal dominant disorder epidermolysis bullosa (EB). Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. Cytokeratins have been found to be useful markers of tissue differentiation, which is directly applicable to the characterization of malignant tumors. (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2505

IHC: Human tonsil stained with ZM186

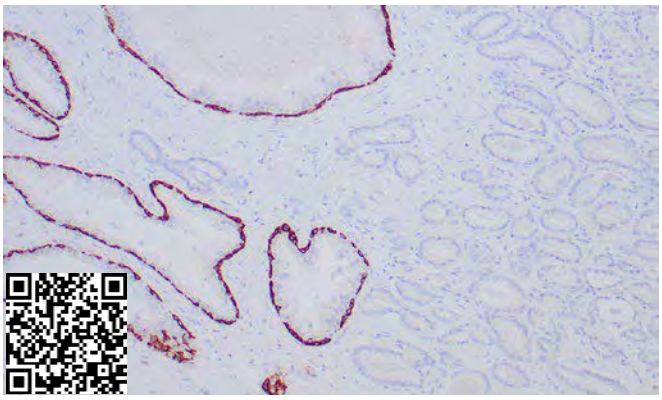


Cytokeratin 5/6 (clone ZR412) IVD; RUO(EU)

Cytokeratin 5 is a basic protein closely related to cytokeratin 6. They share similar tissue distribution and are found in various proportions in many non-keratinizing stratified squamous epithelia. Cytokeratins 5 and 6 are expressed in basal cell epitheliomas, squamous cell carcinomas of the skin, tongue, epiglottis, and rectal-anal region. Cytokeratin 5/6 is a useful aid for the classification of epithelioid mesotheliomas. (more)

Species: Rabbit Monoclonal **Cat:** Z2768

IHC: Human prostate carcinoma stained with ZR412

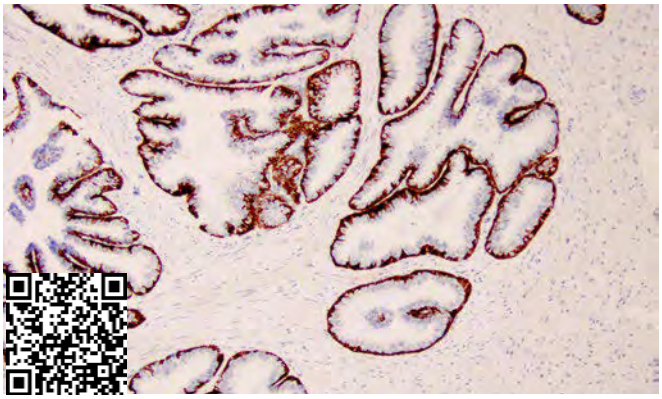


Cytokeratin 5/6 (clone D5/16B4) IVD

Twenty human keratins are divided into acidic (pI <5.7) and basic (pI >6.0) subfamilies. Members of the acidic and basic subfamilies are found together in pairs. The composition of keratin pairs varies with the epithelial cell type, stage of differentiation, cellular growth environment, and disease state. Many studies have shown the usefulness of keratins as markers in cancer research and tumor identification.

Species: Mouse Monoclonal **Cat:** Z2133

IHC: Human prostate tissue stained with D5/16B4

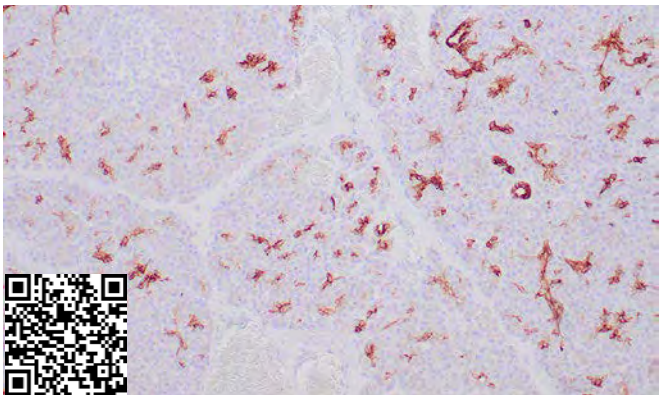


Cytokeratin 7 (clone ZR428) IVD; RUO(EU)

Recognizes an intermediate filament protein (IFP) of 55kDa, which is identified as cytokeratin 7. This MAb is highly specific to cytokeratin 7 and shows no cross-reaction with other IFPs. Cytokeratin 7 is a basic cytokeratin, which is found in most glandular and transitional epithelia but not in the stratified squamous epithelia. Keratin 7 is expressed in the epithelial cells of ovary, lung, and breast but not of colon, prostate, or gastrointestinal tract. Highly useful in distinguishing ovarian carcinomas (keratin 7+) from colon carcinomas (keratin 7-).

Species: Rabbit Monoclonal **Cat#:** Z2784

IHC: Human ovarian carcinoma stained with ZR428

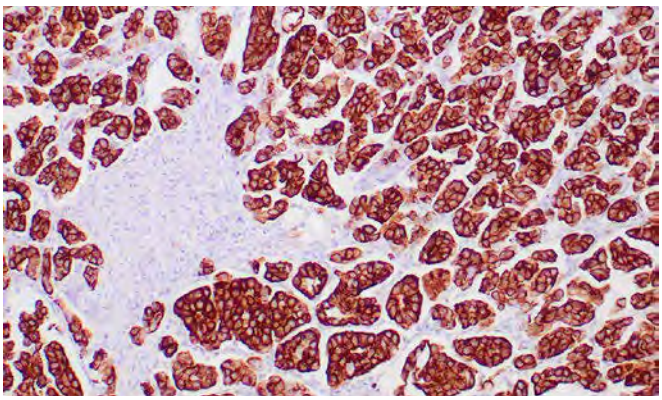


Cytokeratin 7 (clone OV-TL-12/30) IVD

Cytokeratin 7 is a basic cytokeratin which is found in most glandular and transitional epithelia but not in the stratified squamous epithelia. Keratin 7 is expressed in the epithelial cells of ovary, lung, and breast but not of colon, prostate, or gastrointestinal tract. Antibody to cytokeratin is useful in distinguishing ovarian carcinomas (keratin 7+) from colon carcinomas (keratin 7-).

Species: Mouse Monoclonal **Cat#:** Z2067

IHC: Human ovarian carcinoma stained with OV-TL-12/30

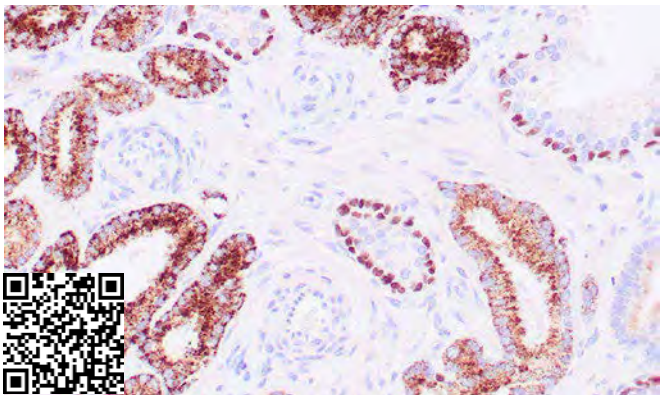


Cytokeratin 8 (clone ZM123) IVD

Keratin 8 belongs to the type B (basic) subfamily of high molecular weight keratins and exists in combination with keratin 18. Keratin 8 is primarily found in the non-squamous epithelia and is present in majority of adenocarcinomas and ductal carcinomas. It is absent in squamous cell carcinomas. Hepatocellular carcinomas are defined by the use of antibodies that recognize only cytokeratin polypeptides 8 and 18. (more)

Species: Mouse Monoclonal **Cat#:** Z2433

IHC: Human basal cell carcinoma stained with ZM123

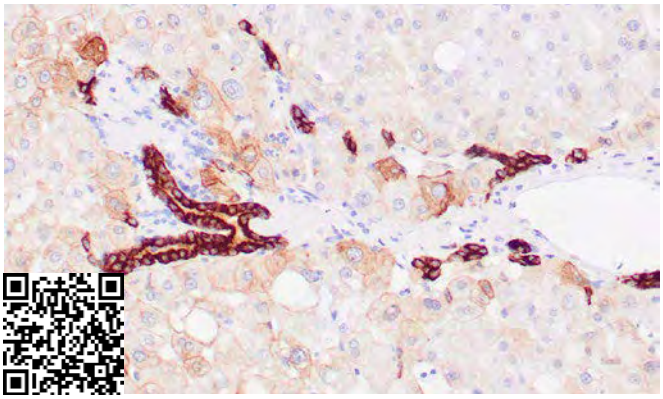


Cytokeratin 8/18 (clone B22.1 & B23.1) IVD

Clone B22.1& B23.1 antibody recognizes all simple epithelia including glandular epithelium, for example thyroid, female breast, gastrointestinal tract, respiratory tract, and urogenital tract including transitional epithelium. All adenocarcinomas and most squamous carcinomas are positive but keratinizing squamous carcinomas are usually negative. Clone K8.8 + DC10 is indistinguishable from the staining obtained with monoclonal antibody 5D3.

Species: Mouse Monoclonal **Cat#:** Z2252

IHC: Human liver stained with B22.1 & B23.1

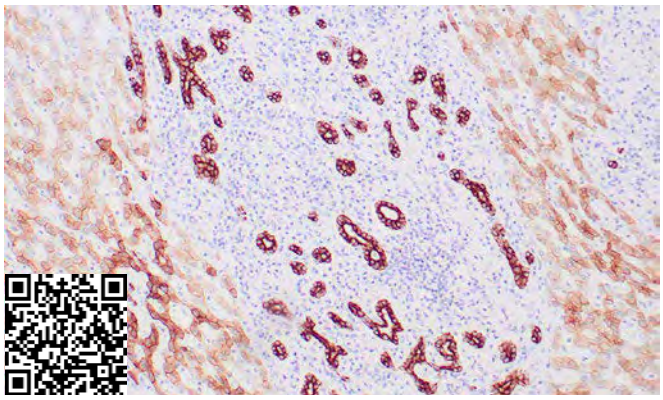


Cytokeratin 8/18 (clone ZM125) IVD

Cytokeratin 8 (CK8) belongs to the type II (or B or basic) subfamily of high molecular weight cytokeratins and exists in combination with cytokeratin 18 (CK18). This MAb recognizes all simple epithelia including glandular epithelium, for example thyroid, female breast, gastrointestinal tract, respiratory tract, and urogenital tract including transitional epithelium. All adenocarcinomas and most squamous carcinomas ... (more)

Species: Mouse Monoclonal **Cat:** Z2435

IHC: Human liver stained with ZM125

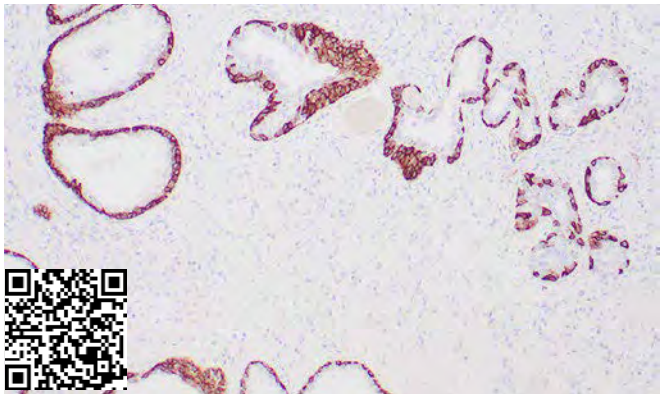


Cytokeratin 14 (clone LL002) IVD

Keratin 14 belongs to the type A (acidic) subfamily of high molecular weight keratins and exists in combination with keratin 5. Keratin 14 has been studied as a prognostic marker in breast cancer(stain basal cells).LL002distinguishes stratified epithelial cells from simple epithelial cells and has been reported useful in the identification of squamous cell carcinomas.

Species: Mouse Monoclonal **Cat#:** Z2042

IHC: Human breast stained with LL002

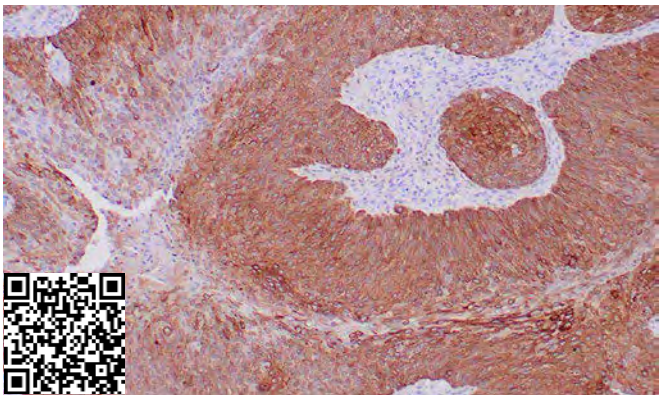


Cytokeratin 14 (clone ZM372) IVD

Anti-CK14 is useful in differentiating squamous cell carcinomas from poorly differentiated epithelial tumors. Anti-CK14 is one of the specific basal markers for distinguishing between basal and non-basal subtypes of breast carcinomas. Anti-CK14 is also a good marker for differentiation of intraductal from invasive salivary duct carcinoma by the positive staining of basal cells surrounding the in-situ neoplasm as well as for... (more)

Species: Mouse Monoclonal **Cat#:** Z2663

IHC: Human squamous cell carcinoma stained with ZM372

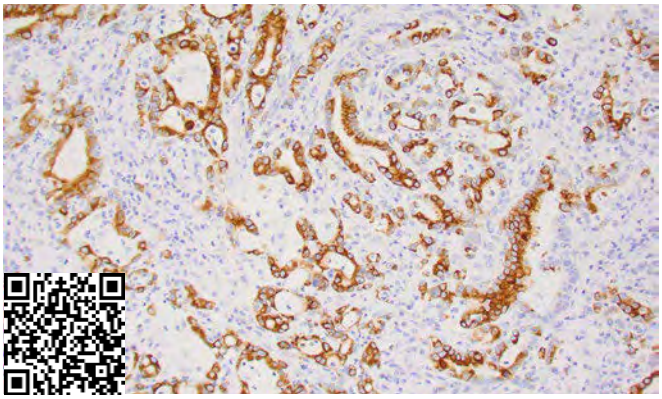


Cytokeratin 17 (clone E3) IVD

The type I cytokeratin 17 (CK17) shows a peculiar localization in human epithelial appendages including hair follicles, which undergo a growth cycle throughout adult life. Predominant expression of CK17and the frequent expression of CK8 and CK19, with little CK6/CK16 and CK1/CK10 expression are the characteristic features of basal cell carcinomas (BCC), suggesting that BCC is differentiated towards undifferentiated... (more)

Species: Mouse Monoclonal **Cat#:** Z2254

IHC: Human pancreatic ductal carcinoma stained with E3

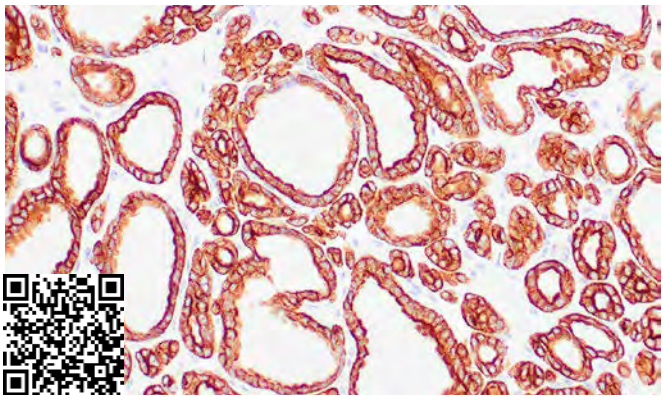


Cytokeratin 18 (clone DC10) IVD

Cytokeratin 18 (CK18) exists in combination with CK8. It was reported that tissues from gastrointestinal tract are positive for both CK8 and CK18 but do not contain CK14. Tissues from gastrointestinal tract, respiratory tract and urogenital tract, as well as endocrine and exocrine tissues and mesothelial cells are positive for CK18. DC10 recognizes a variety of... (more)

Species: Mouse Monoclonal **Cat:** Z2044

IHC: Human thyroid gland stained with DC10

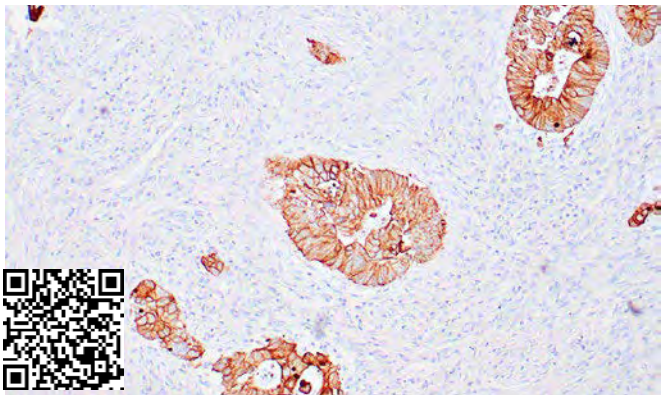


Cytokeratin 18 (clone ZM205) IVD

This MAb reacts with epithelial tumors of the gastrointestinal tract, lung, breast, pancreas, ovary, and thyroid. Cytokeratin 18 exists in combination with cytokeratin 8. Tissues from gastrointestinal tract are positive for both cytokeratin 8 and 18 but do not contain cytokeratin 14. Tissues from GI tract, respiratory tract, urogenital tract, as well as endocrine and exocrine tissues and mesothelial cells are positive for cytokeratin 18. (more)

Species: Mouse Monoclonal **Cat#:** Z2541

IHC: Human colon carcinoma stained with ZM205

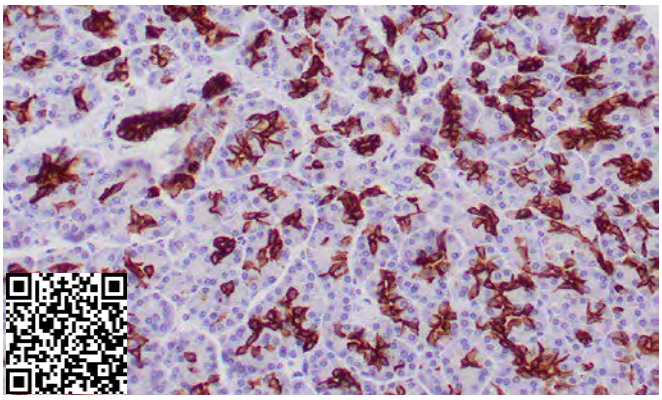


Cytokeratin 19 (clone BA17) IVD

This antibody to CK19 is useful in the identification of liver metastasis.BA17reacts with the MCF-7 cells, which are known to contain CK19. It shows no reaction with the cells lacking CK19 such as A431 and Hela. In combination with HBME1, CK19 is useful in differentiating thyroid carcinoma from benign thyroid follicles. (more)

Species: Mouse Monoclonal **Cat#:** Z2134

IHC: Human pancreatic ducts stained with BA17

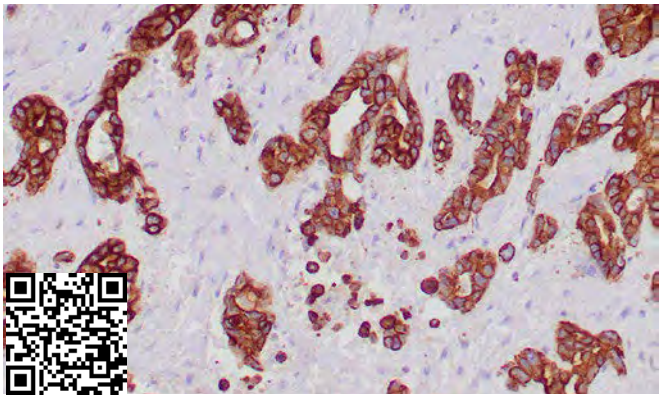


Cytokeratin 19 (clone ZR143) IVD

Reacts with the rod domain of human cytokeratin 19 (CK19), a polypeptide of 40kDa. CK19 is expressed in the sweat gland, mammary gland ductal and secretory cells, bile ducts, gastrointestinal tract, bladder urothelium, oral epithelia, esophagus, and ectocervical epithelium. ZR143 reacts with a wide variety of epithelial malignancies, including colon, stomach, pancreas, biliary tract, liver, and breast adenocarcinomas. Perhaps the most useful application is the identification of thyroid... (more)

Species: Rabbit Monoclonal **Cat#:** Z2688

IHC: Pancreatic ductal carcinoma stained with ZR143

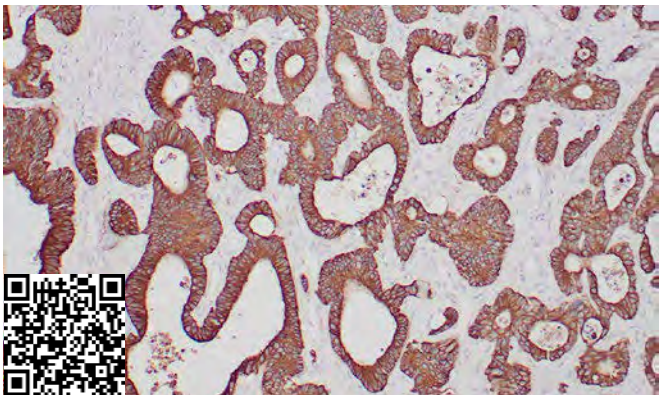


Cytokeratin 20 (clone ZR429) IVD; RUO(EU)

This MAb recognizes an intermediate filament protein of 46kDa, identified as cytokeratin 20 (CK20). CK20 is abundantly expressed in goblet cells and enterocytes of the gastrointestinal tract. It is a useful marker of pancreatic and colorectal cancer. CK20 is expressed under normal, hyperplastic and neoplastic conditions. It has been detected in adenocarcinomas of the colon, stomach and biliary tract. Breast carcinomas are generally non-reactive.

Species: Rabbit Monoclonal **Cat#:** Z2785

IHC: Human colon carcinoma stained with ZR429

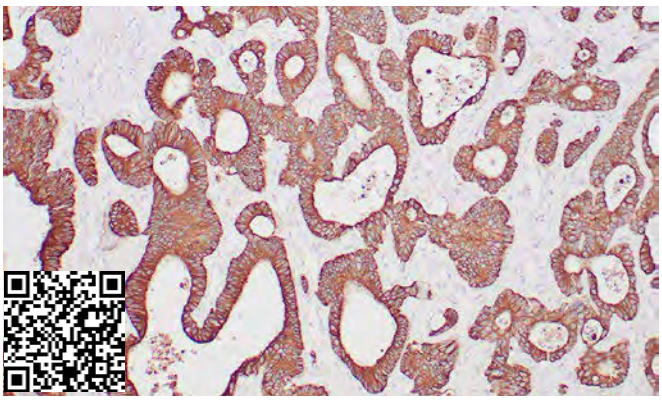


Cytokeratin 20 (clone ZM42) IVD

This MAb recognizes an intermediate filament protein of 46kDa, identified as cytokeratin 20 (CK20). CK20 is abundantly expressed in goblet cells and enterocytes of the gastrointestinal tract. It is a useful marker of pancreatic and colorectal cancer. CK20 is expressed under normal, hyperplastic and neoplastic conditions. It has been detected in adenocarcinomas of the colon, stomach and biliary tract. Breast carcinomas are generally non-reactive.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2349

IHC: Human colon carcinoma stained with ZM42

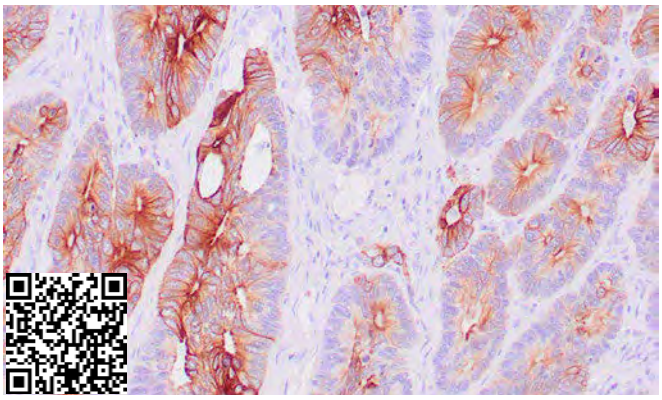


Cytokeratin 20 (clone Ks20.8) IVD

Cytokeratin 20 (CK20) is a type-1 keratin which is primarily expressed in gastric and intestinal epithelium, urothelium, and Merkel-cells. CK20 is expressed in adenocarcinomas of the colon, stomach, pancreas and the bile system. CK20 is also present in mucinous ovarian tumors, transitional-cell and Merkel-cell carcinomas. Notably, the squamous cell carcinomas and adenocarcinomas of the breast, lung... (more)

Species: Mouse Monoclonal **Cat:** Z2065

IHC: Human colon carcinoma stained with Ks20.8

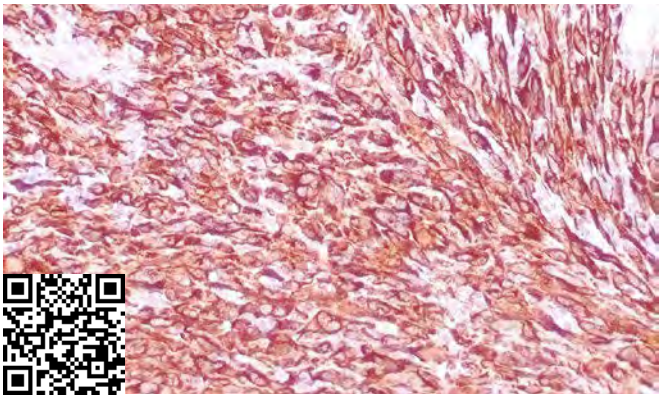


Desmin (clone ZR240) IVD

Vimentin and Desmin are both expressed during skeletal muscle development. Desmin, a 469 amino acid protein found near the Z line in sarcomeres, is expressed more frequently in adult differentiated state tissues. Anti-desmin detects cells of normal smooth, skeletal, and cardiac muscles. Antibody reacts with leiomyomas, leiomyosarcoma, rhabdomyomas, rhabdomyosarcoma, and perivascular cells of glomus tumors of the skin.

Species: Rabbit Monoclonal **Cat#:** Z2536

IHC: Human leiomyosarcoma stained with ZR240

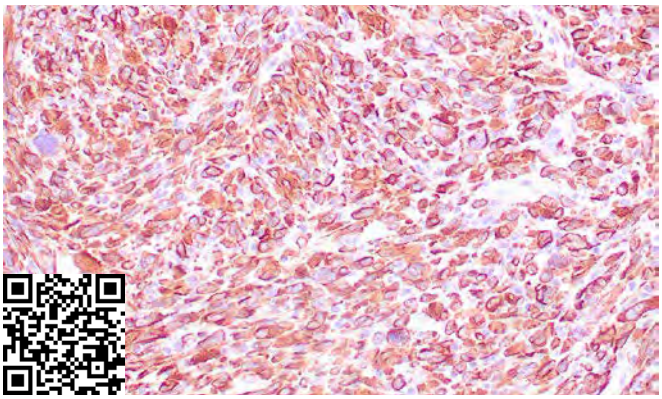


Desmin (clone ZM34) IVD

Desmin is an intermediate filament protein of both smooth and striated muscles. Antibody to desmin reacts with striated (skeletal and cardiac) as well as smooth muscle cells. In skeletal and cardiac muscles, the staining is confined to the Z-bands giving a characteristic striated appearance. Anti-desmin antibody is useful in identification of tumors of myogenic origin. It reacts with leiomyosarcomas (smooth muscle) as well as rhabdomyosarcomas (striated muscle).

Species: Mouse Monoclonal **Cat#:** Z2339

IHC: Human uterus stained with ZM34

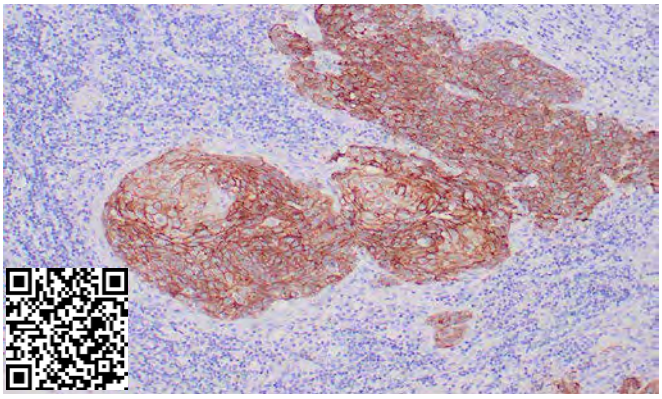


Desmoglein-3 (clone ZR128) IVD

Recognizes and is specific for 130kDa Desmoglein-3 (DSG3). DSG3 has a very high sensitivity (80%) and specificity (100%) in recognizing squamous cell carcinoma (SqCC). Therefore, DSG3 is considered an important marker for lung SqCC and can be a useful ancillary marker to separate SqCC from other subtypes of lung cancer. Moreover, studies have shown that DSG3 expression in lung SqCC may indicate a poor prognosis. (more)

Species: Rabbit Monoclonal **Cat#:** Z2438

IHC: Human squamous cell carcinoma stained with ZR128

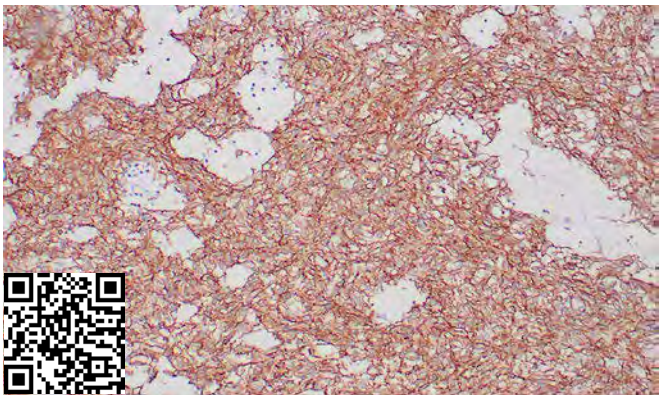


DOG-1 (clone ZR146) IVD

Expression of DOG-1 protein is elevated in the gastrointestinal stromal tumors (GIST's), c-kit signaling-driven mesenchymal tumors of the GI tract. DOG-1 is rarely expressed in other soft tissue tumors, which, due to appearance, may be difficult to diagnose. Immunoreactivity for DOG-1 has been reported in 97.8 percent of scorable GIST's, including all c-kit negative GIST's. Overexpression of DOG-1 has been suggested to... (more)

Species: Rabbit Monoclonal **Cat#:** Z2690

IHC: Human GIST stained with ZR146

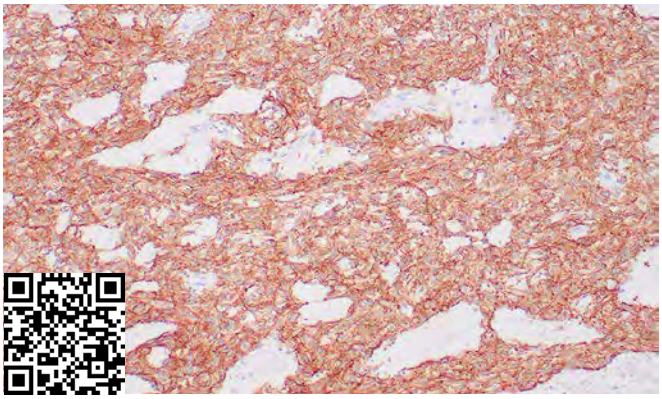


DOG-1 (clone DOG1.1) IVD

DOG1 gene, a gastrointestinal stromal tumor (GIST) specific gene, encoding for the hypothetical protein FLJ10261, which was named "Discovered on GIST 1" (DOG1). DOG1 protein is expressed ubiquitously in gastrointestinal stromal tumors irrespective of KIT or PDGFRa mutation status. DOG1-1 monoclonal antibody yielded positive staining in 95% GIST. For special GISTs, DOG1 immunoreactivity was... (more)

Species: Mouse Monoclonal **Cat:** Z2013

IHC: GIST stained with DOG1.1

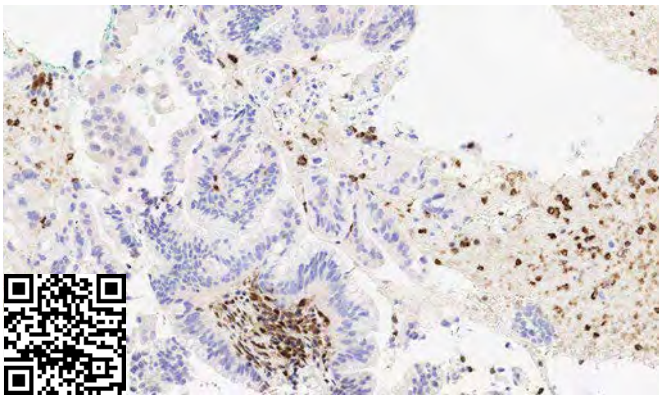


DPC4 (SMAD4) (clone B-8) IVD

SMAD4/DPC4 is implicated as a tumor suppressor, since it is inactivated in more than half of pancreatic carcinomas and to a lesser extent in a variety of other cancers. The lack of SMAD4 expression is present in approximately 80% of cases of pancreatic adenocarcinoma, but rarely in endometrial (0%), colorectal (0%), ovarian (3%), lung (0%), breast (2%) adenocarcinomas, and malignant melanoma (4%). SMAD4 is an... (more)

Species: Mouse Monoclonal **Cat#:** Z2240

IHC: Pancreatic ductal adenocarcinoma stained with B-8

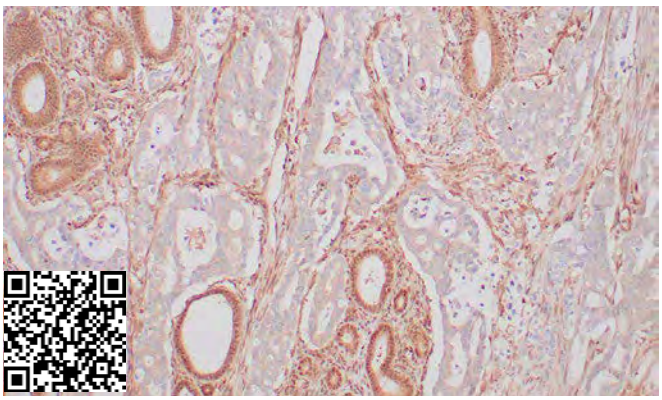


DPC4 (SMAD4) (clone ZR392) IVD

Upon ligand binding, the receptors of the TGF-β family phosphorylate SMAD proteins (SMAD1 and SMAD2). These proteins then move into the nucleus, where they activate transcription. To carry out this function, the receptor activated SMAD1 and SMAD2 require association with DPC4 which is always deleted in pancreatic carcinoma, locus 4, also known as SMAD4. DPC4 is also implicated as a tumor suppressor since it is inactivated in more than half of pancreatic carcinomas and ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2748

IHC: Pancreatic ductal carcinoma stained with with ZR392

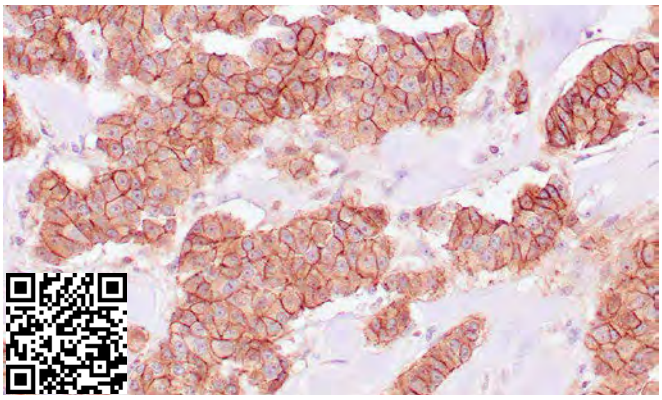


E-Cadherin (clone ZM63) IVD

Monospecific for E-cadherin. E-cadherin plays an important role in epithelial cell adhesion. A decreased expression of E-cadherin is associated with metastatic potential and poor prognosis in breast cancer, prostate and esophageal cancer. In combination with p120 Catenin, it is useful for the differentiation between ductal (E-cadherin +) and lobular (E-cadherin -) breast carcinomas. It may also help in diagnosis of mesothelioma.

Species: Monospecific Mouse Monoclonal **Cat:** Z2373

IHC: Human infiltrating breast carcinoma stained with ZM63

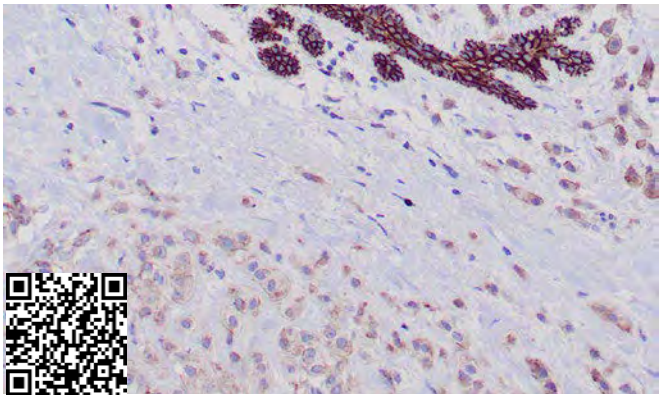


E-cadherin (clone ZR375) IVD

E-cadherin is a transmembrane, calcium-dependent cell adhesion protein that mediates cell to cell adhesion and maintains the structural and functional integrity of epithelial tissues. Aberrant E-cadherin expression breaks cell to cell contacts, and thus, cells acquire the ability to migrate. In normal tissues, immunostaining of E-cadherin is localized to the membrane of epithelial cells, consistent with its role in cell adhesion. And in tumor tissues, E-cadherin stains positively in... (more)

Species: Rabbit Monoclonal **Cat#:** Z2666

IHC: Human breast (lobular) stained with ZR375

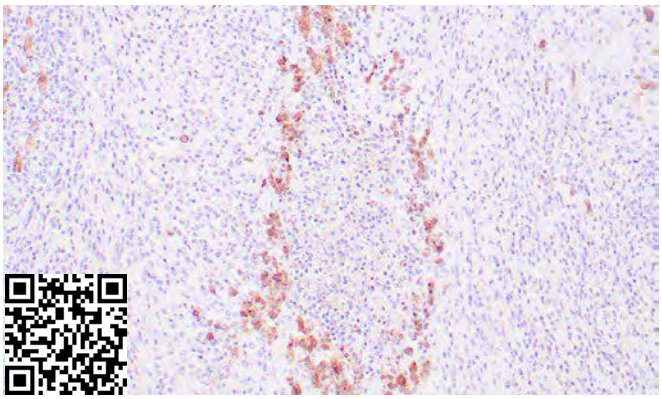


EBV-LMP (clone CS1-4) RUO

CS1-4 reacts strongly with EBV-positive lymphoblastoid cell lines and EBV infected B cell immunoblasts in infectious mononucleosis. It also reacts with 25 to 50 per cent of EBV-associated undifferentiated nasopharyngeal carcinomas and with Reed Sternberg cells in approximately 90% of EBV-associated Hodgkin's lymphoma cases. The cocktail recognizes distinct epitopes on the hydrophilic carboxyl region of LMP which is exposed to the cytosol.

Species: Mouse Monoclonal **Cat#:** Z2094

IHC: Human Hodgkin's lymphoma stained with CS1-4

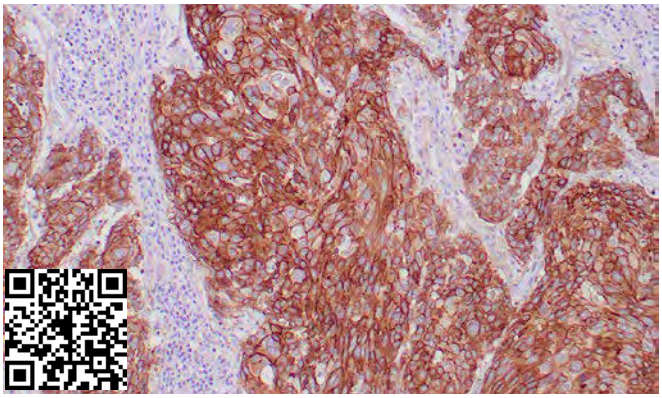


EGFR (clone ZR16) IVD

Recognizes 170kDa EGFR, a type I receptor tyrosine kinase with sequence homology to erbB-1, -2, -3 -4 or HER-1, -2, -3 -4. It binds to Epidermal Growth Factor (EGF), Transforming Growth Factor-a (TGF-a), Heparin-binding EGF (HB-EGF), amphiregulin, betacellulin, and epiregulin. EGFR is overexpressed in breast, brain, bladder, lung, gastric, head & neck, esophagus, cervix, vulva, ovary, and endometrium tumors. It is predominantly present in squamous cell carcinomas.

Species: Rabbit Monoclonal **Cat#:** Z2743

IHC: Lung squamous cell carcinoma stained with ZR16

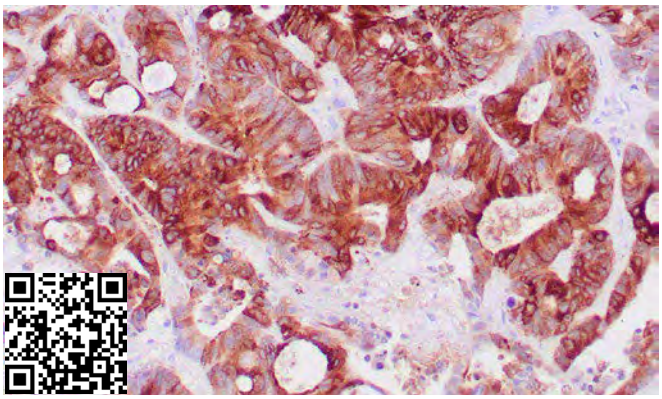


EMA (clone E29) IVD

Epithelial membrane antigen (EMA), or CA15-3, or polymorphic epithelial mucin (PEM), or sialomucin, or episialin is a mucin-like glycoprotein. Antibody to EMA has been shown useful as a pan- epithelial marker for detecting early metastatic loci of carcinoma in the bone marrow or liver.

Species: Mouse Monoclonal **Cat#:** Z2048

IHC: Human breast cancer stained with E29

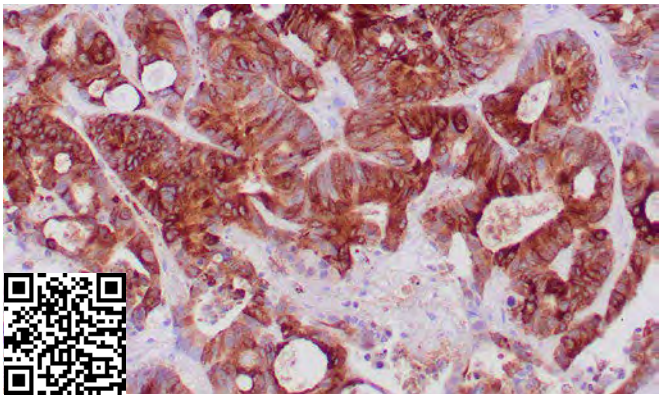


EMA (clone ZR133) IVD

Superbly stains routine formalin/paraffin carcinomas and is a valuable marker for staining many carcinomas. It stains normal and neoplastic cells from various tissues, including mammary epithelium, sweat glands, and colorectal carcinoma. Hepatocellular carcinoma, adrenal carcinoma, and embryonal carcinomas are consistently EMA negative, so keratin positivity with negative EMA favors one of these tumors. EMA is frequently positive in meningioma, which can be helpful when... (more)

Species: Rabbit Monoclonal **Cat#:** Z2684

IHC: Human colon cancer stained with ZR133

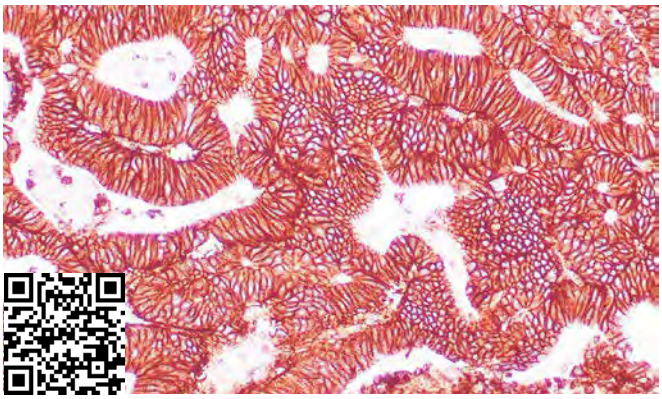


EP-CAM (clone ZM131) IVD

Ep-CAM (epithelial cellular adhesion molecule is expressed on basolateral cell surface in most simple epithelia and a vast majority of carcinomas. This antibody has been used to distinguish adenocarcinoma from pleural mesothelioma and hepatocellular carcinoma. This antibody is also useful in distinguishing serous carcinomas of the ovary from mesothelioma.

Species: Monospecific Mouse Monoclonal **Cat:** Z2441

IHC: Human colon adenocarcinoma stained with ZM131

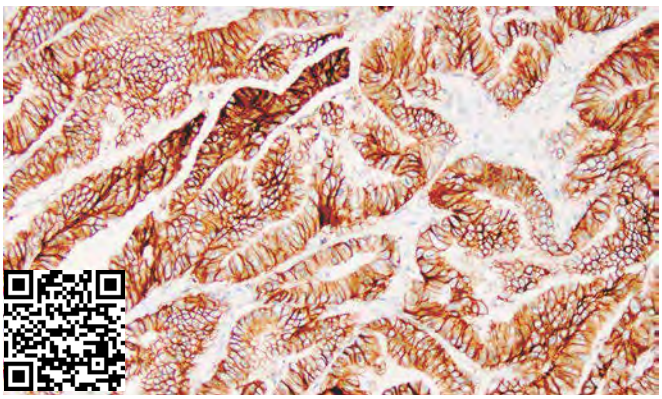


EP-CAM (clone Ber-EP4) IVD

EP-CAM (Ber-EP4) is normally expressed at the basolateral membrane of cells in the majority of epithelial tissues. It is not expressed in adult squamous epithelia, hepatocytes, myoepithelial cells, mesothelial cells or fibroblasts. EP-CAM is found in the large majority of adenocarcinomas of most sites (50-100%) in various studies; as well as neuroendocrine tumors, including small cell carcinoma. Renal clear cell carcinoma... (more)

Species: Mouse Monoclonal **Cat#:** Z2314

IHC: Human colon adenocarcinoma stained with Ber-EP4

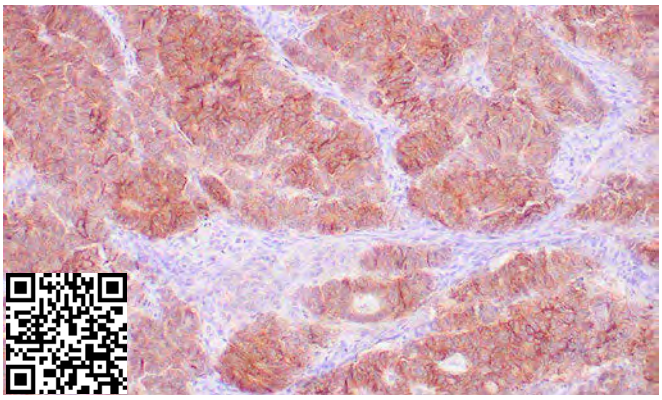


EP-CAM/ESA (clone MOC-31) IVD

Anti-MOC-31 reacts with a transmembrane glycoprotein present on most glandular epithelium and tumors originating from such epithelium. This antibody has been used to distinguish adenocarcinoma from mesothelioma and hepatocellular carcinoma. This antibody is also useful in distinguishing serous carcinomas of the ovary from mesothelioma.

Species: Mouse Monoclonal **Cat#:** Z2162

IHC: Human colon adenocarcinoma stained with MOC-31

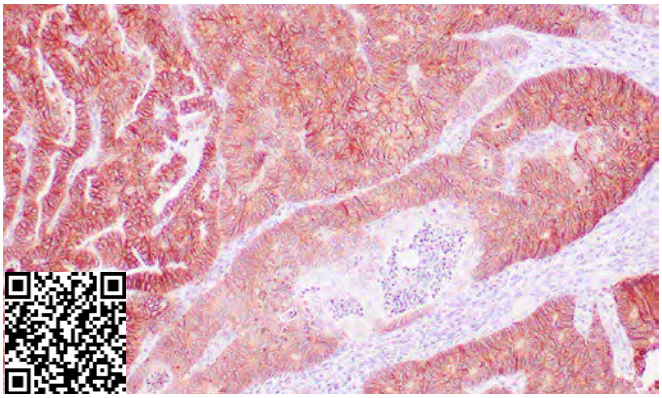


EP-CAM/ESA (clone ZR307) IVD

The binding epitope of this antibody is located in the first EGF-like repeat domain (EGF1) between amino acids 27-59 of EpCAM.EpCAM is expressed in most simple epithelia and a vast majority of carcinomas with the exception of adult squamous epithelium, hepatocytes and gastric epithelial cells. ZR307 distinguishes adenocarcinoma from pleural mesothelioma and hepatocellular carcinoma and serous carcinomas of the ovary from mesothelioma.

Species: Rabbit Monoclonal **Cat#:** Z2557

IHC: Human colon adenocarcinoma stained with ZR307

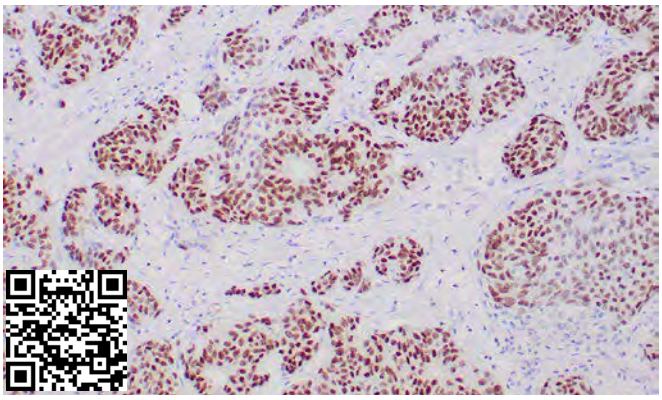


ER (clone ZR147) IVD

Estrogen receptor (ER) is present in the nuclei of epithelial cells in normal breast and endometrial tissues and a subset of breast carcinomas. Immunohistochemical assays show that positive steroid hormone status has predicted favorable overall survival, independently of hormonal treatment. Secondly, ERα can be used as a tumor marker, preferentially in combination with an antibody to the progesterone receptor, e.g., in the classification of adenocarcinomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2691

IHC: Human Human breast carcinoma stained with ZR147

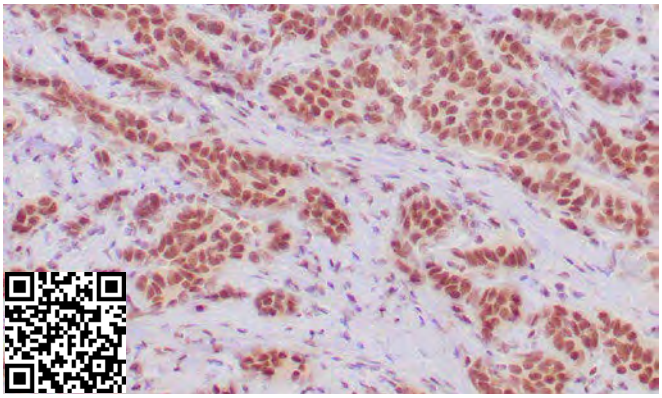


ER (clone ZM319) IVD

Recognizes a protein of 67kDa, which is identified as estrogen receptor (ER) alpha. This antibody strongly stains the nucleus of epithelial cells in breast carcinomas. The ER is an important regulator of growth and differentiation in the mammary gland. Presence of ER in breast tumors indicates an increased likelihood of response to antiestrogen (e.g. tamoxifen) therapy.

Species: Mouse Monoclonal **Cat#:** Z2625

IHC: Human breast adenocarcinoma stained with ZM319

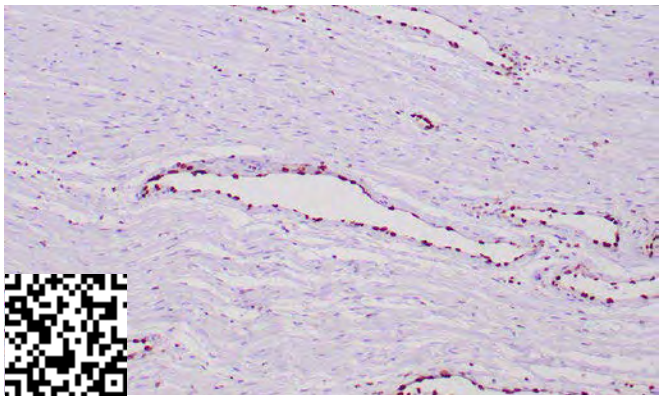


ERG (clone ZR331) IVD

ERG, which is involved in hematopoietic and endothelial development and is constitually expressed in endothelial cells in blood and lymphatic vessels, and in bone marrow stem cells. ERG is expressed in virtually all endothelial neoplasms including hemangioendothelioma, angiosarcoma and Kaposi sarcoma. ERG is overexpressed secondary to gene rearrangement in cases of prostate adenocarcinoma, GI... (more)

Species: Rabbit Monoclonal **Cat#:** Z2637

IHC: Human vascular endothelial cells stained with ZR331

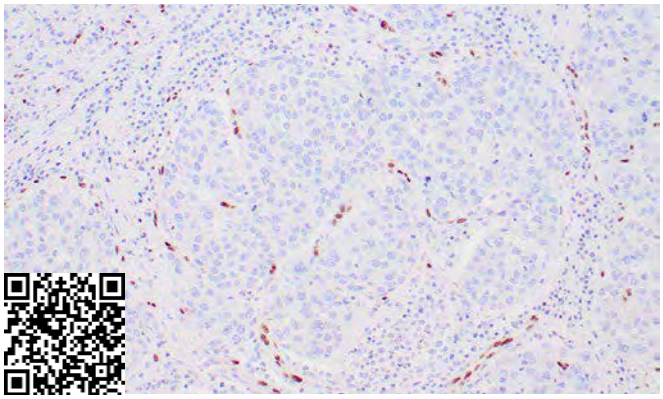


Erythropoietin (clone ZM135) IVD

Recognizes a protein of about 37kDa, which is identified as Erythropoietin (EPO). Erythropoietin is a secreted, glycosylated cytokine hormone composed of four alpha helical bundles. It is the primary factor responsible for regulating erythropoiesis during steady-state conditions and in response to blood loss and hemorrhage in the adult organism. Erythropoietin is synthesized by the kidney and stimulates the proliferation and maturation of... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2445

IHC: Human kidney stained with ZM135

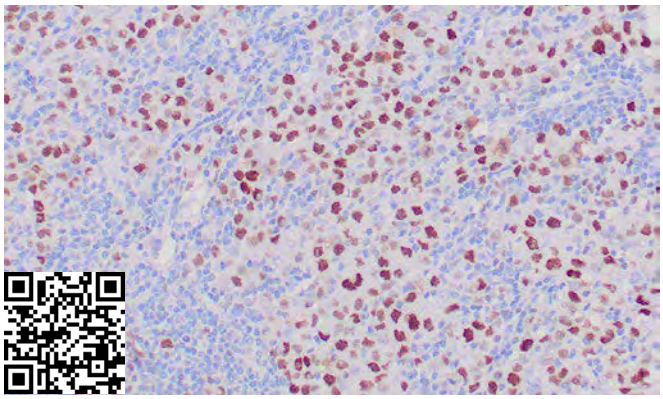


EZH2 (clone ZR150) IVD

EZH2 is the catalytic subunit of polycomb repressive complex 2 (PRC2) and generates a methylation epigenetic mark at lysine 27 residue of histone H3 (H3K27me3) to silence gene expression. EZH2 target genes are involved in many biological processes such as stem cell pluripotency, cell proliferation, and oncogenic transformation. EZH2 expression is found in many malignancies: prostate, breast, uterine, gastric, renal, melanoma and in non-small cell lung cancers and lymphoma.

Species: Rabbit Monoclonal **Cat#:** Z2692

IHC: Human breast ductal carcinoma stained with ZR150

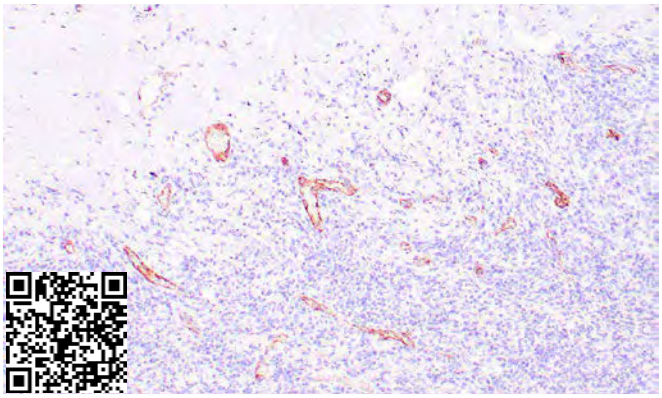


Factor VIII-R (clone ZM64) IVD

Factor VIII related antigen (von Willebrand factor) is one of the most useful markers to identify endothelial (or megakaryocytic) lineage of neoplasms. As not all endothelial cells synthesize / store) this molecule, about 30% of tumors of vascular origin fail to stain for factor VIII related antigen, regardless of whether they are benign or malignant. Staining for factor VIII related antigen has also been used to measure angiogenesis... (more)

Species: Mouse Monoclonal **Cat#:** Z2393

IHC: Human tonsil stained with ZM64

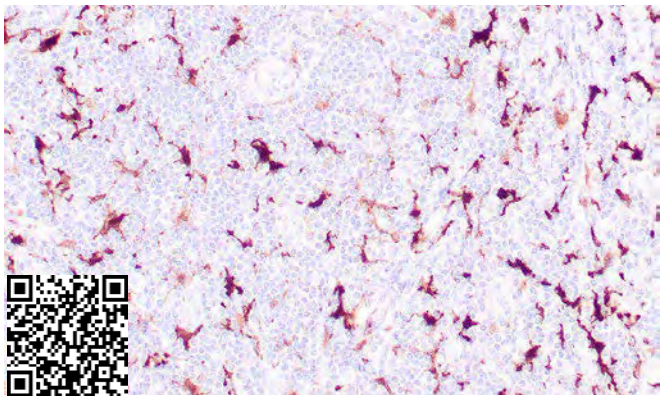


Factor XIIIa (clone ZM84) IVD

Anti-factor XIIIa has been found to be useful in differentiating between dermatofibroma (almost all cases are positive), dermatofibrosarcoma protuberans (-/+) and desmoplastic malignant melanoma (-). Anti-factor XIIIa positivity is also seen in capillary hemangioblastoma, hemangioendothelioma, hemangiopericytoma, xanthogranuloma, xanthoma, hepatocellular carcinoma, glomus tumor, and meningioma.

Species: Mouse Monoclonal **Cat#:** Z2394

IHC: Human neuroblastoma stained with ZM84

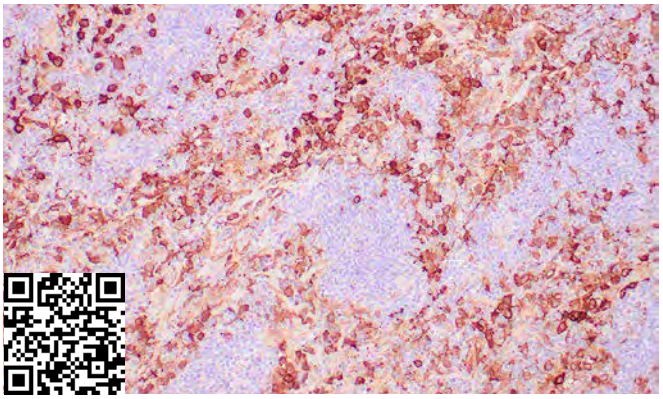


Fascin (clone ZM192) IVD

Human fascin is expressed predominantly in dendritic cells. Lymphoid cells, myeloid cells and plasma cells are negative. However, Reed Sternberg cells in Hodgkin's lymphoma are positive for fascin staining. Epstein-Barr virus may induce expression of fascin in B cells. Clone 55K-2 can be used as an effective marker for Reed Sternberg cells.

Species: Mouse Monoclonal **Cat#:** Z2446

IHC: Human Hodgkin lymphoma stained with ZM192

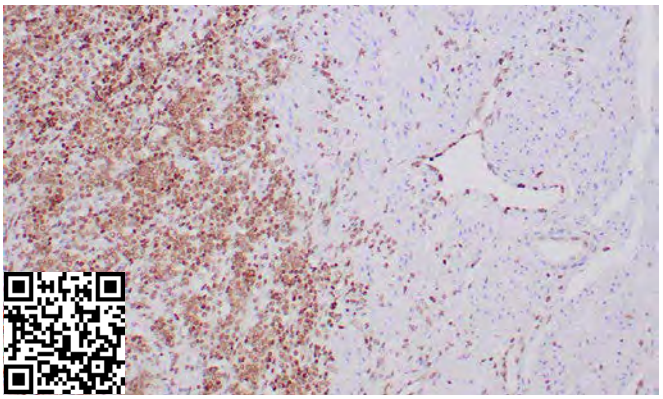


FLI-1 (clone ZR217) IVD; RUO(EU)

Recognizes 51kDa FLI1, a member of the ETS family of DNA binding transcription factors, and involved in cellular proliferation and tumorigenesis. ~90% of Ewing's Sarcoma (EWS) / Primitive Neuroectodermal Tumors (PNET) have a specific translocation, t(11;22) (q24;q12), which results in the fusion of EWS to Fli-1, and production of an EWS-Fli-1 fusion protein. In normal tissues, only endothelial cells and small lymphocytes express Fli-1. Fli-1 is expressed in most vascular tumors, including... (more)

Species: Rabbit Monoclonal **Cat#:** Z2498

IHC: Human Ewing's sarcoma stained with ZR217

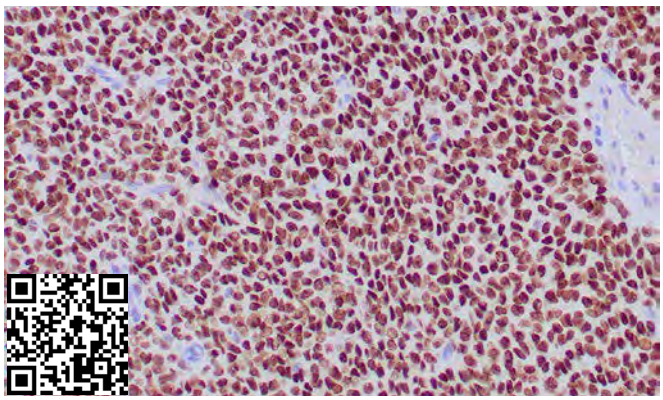


FOXL2 (clone ZR399) IVD; RUO(EU)

FOXL2 is a critical factor for ovary differentiation, maintenance and repression of the genetic program for somatic testis determination. It prevents trans-differentiation of the ovary to testis through repression of the Sertoli cell-promoting gene SOX9. FOXL2 is mainly expressed in ovary, parathyroid gland, and sex cord-stromal tumors. FOXL2 is generally used to diagnose sex cord-stromal tumors with inhibin, calretinin, and SF-1. (more)

Species: Rabbit Monoclonal **Cat#:** Z2755

IHC: Human adult granulosa cell tumor stained with ZR399

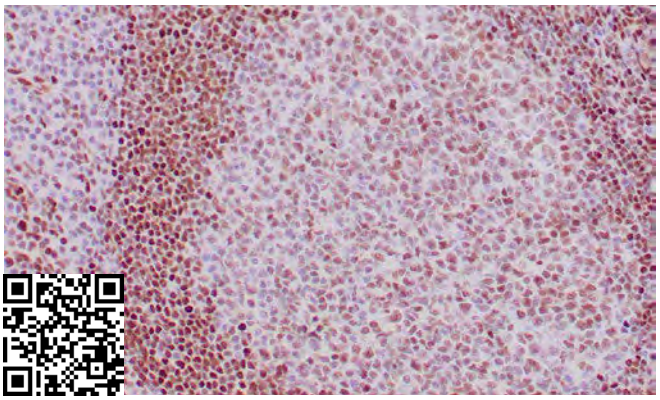


FOXP1 (clone ZR333) IVD

FOXP1 protein plays an important role in the specification and differentiation of lung epithelium, also acts cooperatively with FOXP4 to regulate lung secretory epithelial cell fate and regeneration by restricting the goblet cell lineage program. FOXP1 is useful in subclassification of DLBCL and a high cutoff (≥80%) for FOXP1 is needed to achieve high specificity for the ABC subtype. (more)

Species: Rabbit Monoclonal **Cat#:** Z2639

IHC: Human tonsil stained with ZR333

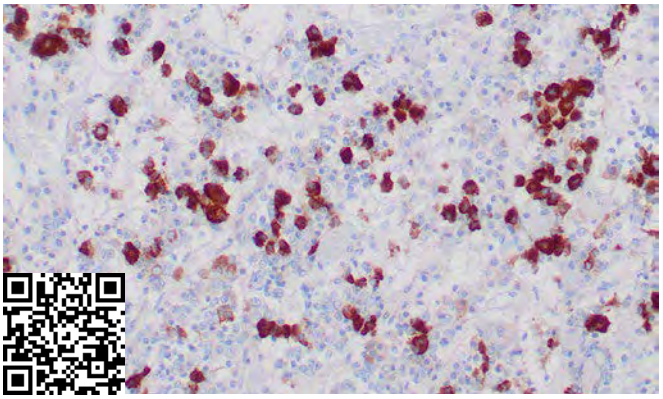


FSH (clone ZR246) IVD

Reacts with the 22kDa beta subunit of FSH. Follicle stimulating hormone (FSH) is a hormone synthesized and secreted by gonadotrophs in the anterior pituitary gland. In the ovary, FSH stimulates growth of immature Graafian follicles to maturation. In men, FSH enhances production of androgen-binding protein by the Sertoli cells of the testis and is critical for spermatogenesis. FSH is a useful marker in the classification of pituitary tumors and the study of pituitary disease.

Species: Rabbit Monoclonal **Cat#:** Z2721

IHC: Human normal pituitary stained with ZR246

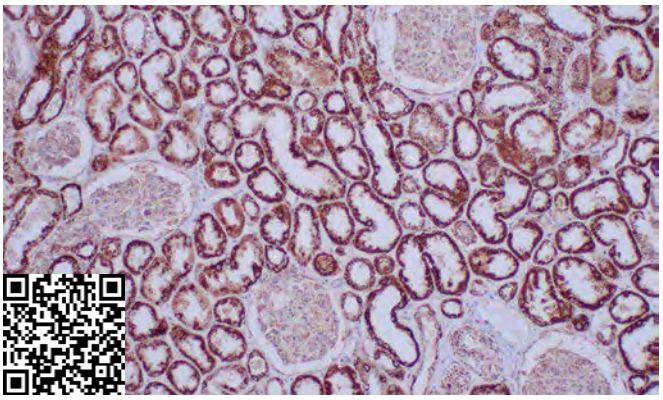


NEW Fumarate Hydratase (clone ZR458) IVD; RUO(EU)

Fumarate hydratase (FH), also known as fumarase. By immunohistochemistry, normal tissues with rich mitochondria, such as the kidney and liver, are strongly positive for FH. Germline mutations in the fumarate hydratase gene cause Hereditary Leiomyomatosis and Renal Cell Cancer (HLRCC). This genetic syndrome predisposes individuals to develop benign smooth muscle tumors (leiomyomas) and an aggressive form of kidney cancer (renal cell carcinoma). (more)

Species: Rabbit Monoclonal **Cat#:** Z2819

IHC: Human kidney stained with ZR458

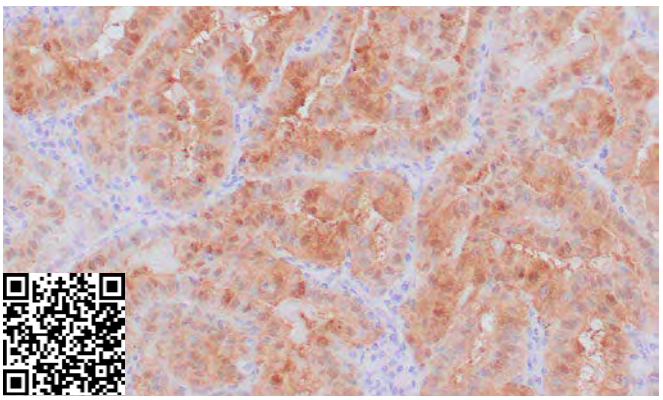


Galectin-3 (clone ZR430) IVD; RUO(EU)

Galectin-3 is a member of the beta-galactosidase-binding lectin family. It is associated with cell growth, adhesion, inflammation, mRNA processing, and apoptosis. Aberrant expression of Galectin-3 is related to malignant transformation and metastasis in carcinomas of the breast, colon and thyroid. Galectin-3 reactivity can be seen in the nucleus of neutrophils, vascular endothelium, carcinomas of the colon, breast, and thyroid. Galectin-3 may be useful in the differentiation of benign and... (more).

Species: Rabbit Monoclonal **Cat#:** Z2786

IHC: Thyroid papillary carcinoma stained with ZR430

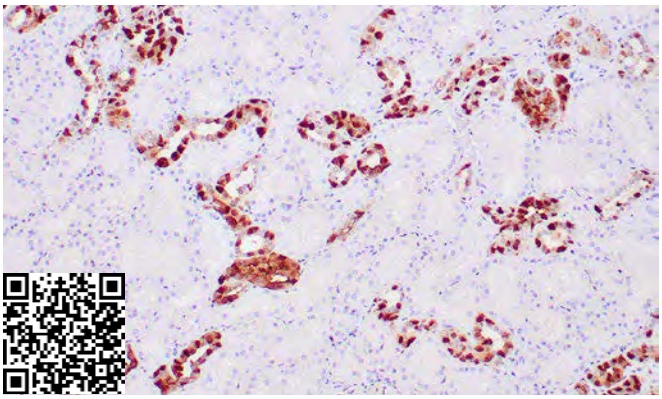


Galectin-3 (clone ZM182) IVD

Aberrant expression of Galectin-3 is related to malignant transformation and metastasis in carcinomas of the breast, colon and thyroid. Galectin-3 reactivity can be seen in the nucleus of neutrophils, vascular endothelium, carcinomas of the colon, breast, and thyroid. Galectin-3 may be useful in the differentiation of benign and malignant thyroid neoplasms and certain liver disorders. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2487

IHC: Human kidney stained with ZM182

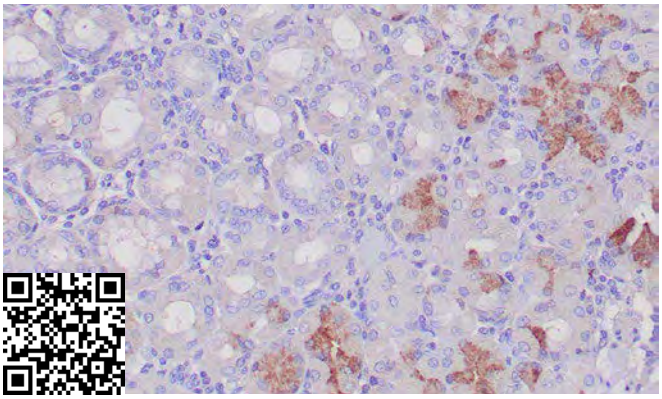


Gastrin (clone ZM359) IVD

Gastrin is a hormone that stimulates secretion of hydrochloric acid by the gastric mucosa, which results in gastrin formation inhibition. This hormone also acts as a mitogenic factor for gastrointestinal epithelial cells. Gastrin has been suggested to induce leukocyte-endothelial cell interactions and to have a pro-inflammatory effect. Anti-gastrin stains G-cells of human antral/pyloric mucosa and cells producing gastrin or a structural gastrin analog as is seen in stomach. (more)

Species: Mouse Monoclonal **Cat#:** Z2735

IHC: Human gastric antral mucosa stained with ZM359

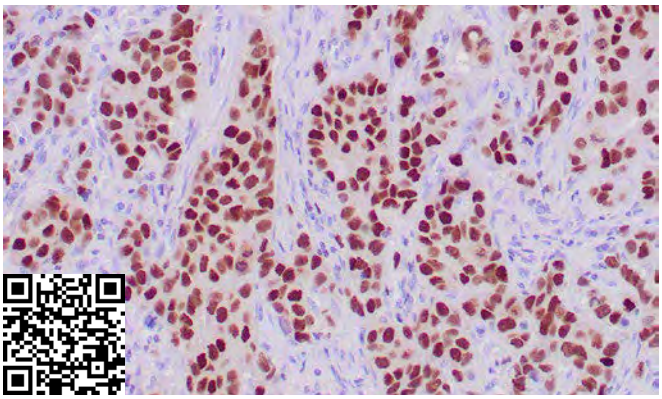


GATA3 (clone ZR358) IVD

Among several other roles, GATA-3 is involved in luminal cell differentiation in the mammary gland and appears to control a set of genes involved in the differentiation and proliferation of breast cancer. GATA-3 expression is associated with the expression of estrogen receptor-alpha (ER) in breast cancer. GATA-3 is a novel marker for bladder cancer. The study showed that GATA-3 stained 67% of urothelial Carcinomas but none of the prostate or renal carcinomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2742

IHC: Human breast ductal carcinoma stained with ZR358

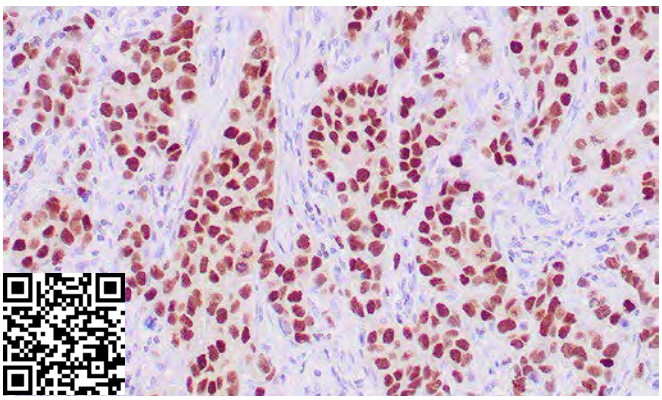


GATA-3 (clone L50-823) IVD

Among several other roles, GATA-3 is involved in luminal cell differentiation in the mammary gland and appears to control a set of genes involved in the differentiation and proliferation of breast cancer. The expression of GATA-3 is associated with the expression of estrogen receptor-alpha (ER) in breast cancer. GATA-3 has been shown to be a novel marker for bladder cancer. (more)

Species: Mouse Monoclonal **Cat:** Z2227

IHC: Human breast carcinoma stained with L50-823

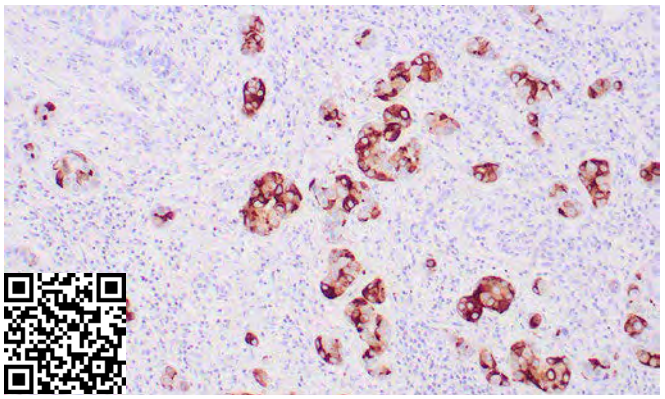


GCDFP-15 (clone ZM23) IVD

GCDFP-15 is a major protein component of benign breast gross cysts. It is a known marker of breast cancer, as it is found in approximately 50% of all breast cancer specimens. GCDFP-15, also known as PIP, for prolactin inducible protein, is a prolactin and androgen-controlled protein. This antibody is useful in the identification of metastatic breast carcinoma, or fluid analysis.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2345

IHC: Human breast tissue stained with ZM23

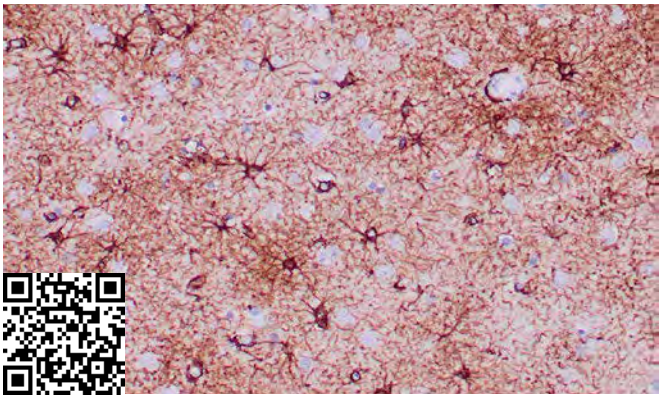


GFAP (clone ZR356) IVD

This MAb recognizes a protein of ~50kDa, which is identified as Glial Fibrillary Acidic Protein (GFAP). It shows no cross-reaction with other intermediate filament proteins. GFAP is found explicitly in astroglia. GFAP is a popular marker for localizing benign astrocyte and neoplastic cells of glial origin in the central nervous system. Antibody to GFAP helps differentiate primary gliomas from metastatic lesions in the brain and document astrocytic differentiation in tumors outside the CNS.

Species: Rabbit Monoclonal **Cat#:** Z2386

IHC: Human brain stained with ZR356

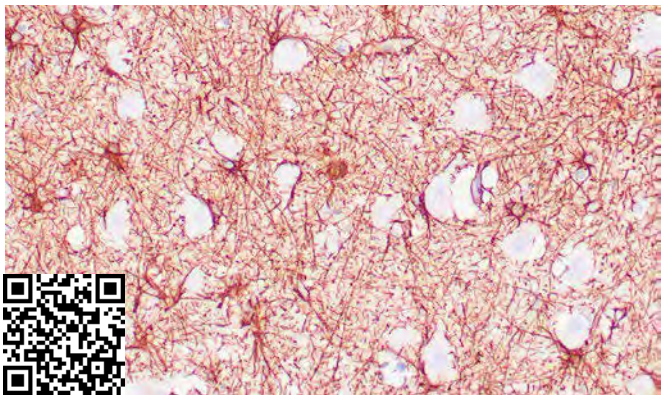


GFAP (clone GA-5) IVD

This MAb to GFAP is useful in differentiating primary gliomas from metastatic lesions in the brain and for documenting astrocytic differentiation in tumors outside the CNS. GFAP stains astrocytes, glial cells, ependymal cells, and their corresponding tumors. Many types of neural tumors such as neuroblastomas, Schwannomas, as well as extra-CNS tumors are not labeled. GA-5 is very sensitive in detecting GFAP in routine formalin-fixed, paraffin-embedded tissues.

Species: Mouse Monoclonal **Cat#:** Z2255

IHC: Human brain stained with GA-5

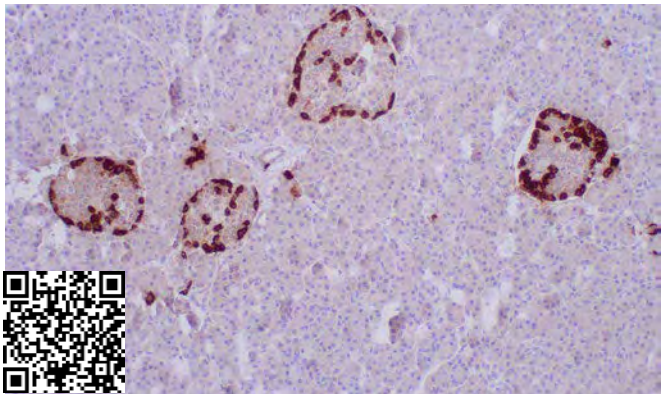


NEW Glucagon (clone ZR470) IVD; RUO(EU)

Glucagon is synthesized and released by the alpha-cells of the islets of Langerhans in pancreas. It regulates blood glucose by increasing gluconeogenesis and decreasing glycolysis, stimulates fluid secretions from the intestine and suppresses the release of gastrin. Glucagon antibody detects glucagon-secreting cells and tumors such as glucagonomas, of which approximately 80% are malignant. (more)

Species: Rabbit Monoclonal **Cat:** Z2830

IHC: Human pancreas stained with ZR470

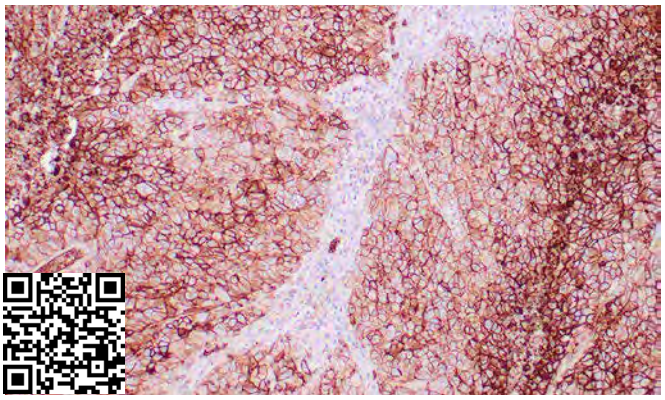


GLUT-1 (clone ZR308) IVD

Recognizes a protein of 55kDa, which is identified as GLUT-1. Glut-1 is a major glucose transporter in the mammalian blood-brain barrier. Overexpression of Glut-1 has been linked to tumor progression or poor survival of patients with carcinomas of the colon, breast, cervical, lung, bladder and mesothelioma. Glut-1 is a sensitive and specific marker for the differentiation of malignant mesothelioma (positive) from reactive mesothelium (negative).

Species: Rabbit Monoclonal **Cat#:** Z2585

IHC: Human breast carcinoma stained with ZR308

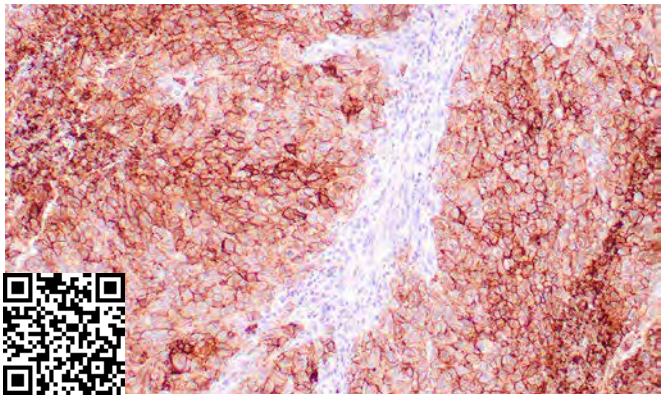


GLUT-1 (clone ZM137) IVD

Recognizes a protein of 55kDa, which is identified as GLUT-1. Glut-1 is a major glucose transporter in the mammalian blood-brain barrier. Overexpression of Glut-1 has been linked to tumor progression or poor survival of patients with carcinomas of the colon, breast, cervical, lung, bladder and mesothelioma. Glut-1 is a sensitive and specific marker for the differentiation of malignant mesothelioma (positive) from reactive mesothelium (negative).

Species: Mouse Monoclonal **Cat#:** Z2448

IHC: Human breast carcinoma stained with ZM137

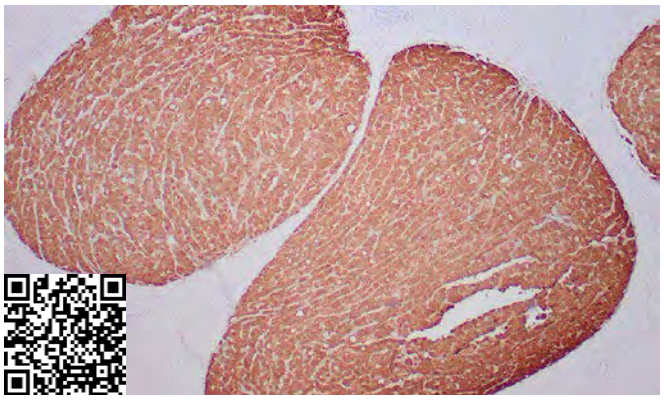


Glutamine synthetase (clone ZR431) IVD; RUO(EU)

Glutamine synthetase (Gl Syn) forms a homo-octamer that serves as a catalyst for the amination of glutamic acid to form glutamine. This enzyme is a marker for astrocytes, which serve as the primary site of conversion of glutamic acid to glutamine in the brain. Induction of glutamine synthetase is seen upon astrocyte cell contact with neurons. Elevated expression of glutamine synthetase in glial cells has been shown to protect neurons from degeneration due to excess ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2787

IHC: Human liver stained with ZR431

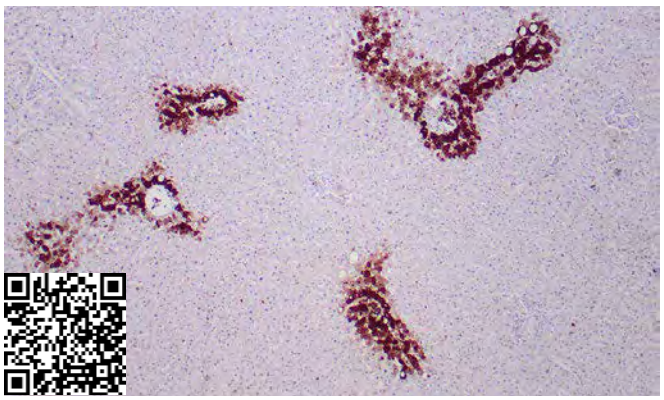


Glutamine synthetase (clone ZM377) IVD

This enzyme is a marker for astrocytes, which serve as the primary site of conversion of glutamic acid to glutamine in the brain. Elevated expression of glutamine synthetase in glial cells has been shown to protect neurons from degeneration due to excess glutamate. Overexpression of glutamine synthetase has been shown in primary liver cancers, indicating a potential role for glutamine synthetase in hepatocyte transformation.

Species: Mouse Monoclonal **Cat#:** Z2668

IHC: Human liver stained with ZM377

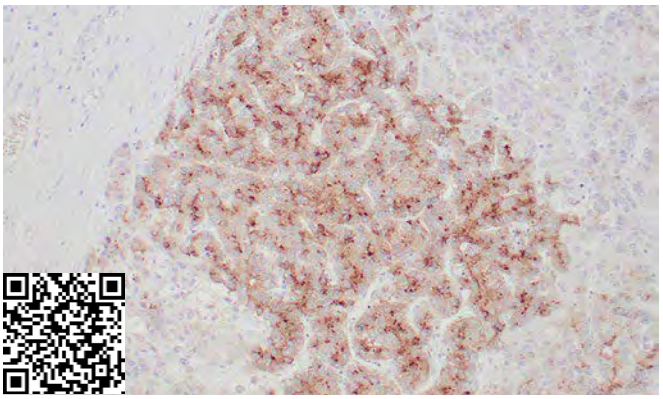


Glypican 3 (clone ZR405) IVD; RUO(EU)

Glypican-3 (GPC3) is a glycosylphospatidyl inositol-anchored membrane protein, which may also be found in a secreted form. Anti-GPC3 has been identified as a useful tumor marker for the diagnosis of hepatocellular carcinoma (HCC), hepatoblastoma, melanoma, testicular germ cell tumors, and Wilms tumor. In patients with HCC, GPC3 is overexpressed in neoplastic liver tissue and elevated in serum, but is undetectable in normal liver, benign liver, and the serum of healthy donors. (more).

Species: Rabbit Monoclonal **Cat#:** Z2761

IHC: Human hepatocellular carcinoma stained with ZR405

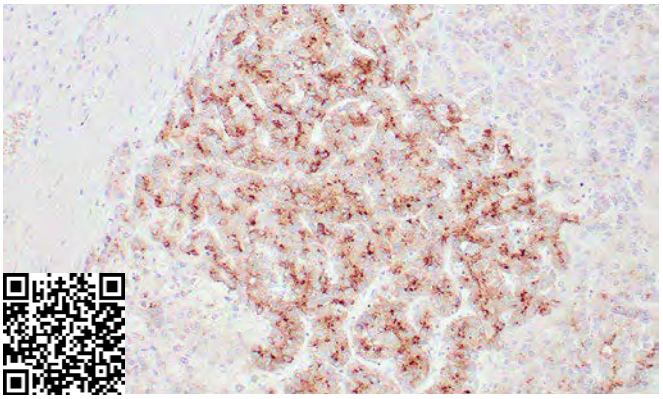


Glypican 3 (clone ZM138) IVD

Anti-GPC3 has been identified as a useful tumor marker for the diagnosis of hepatocellular carcinoma (HCC), hepatoblastoma, melanoma, testicular germ cell tumors, and Wilm's tumor. In patients with HCC, GPC3 is overexpressed in neoplastic liver tissue and elevated in serum, but is undetectable in normal liver, benign liver, and the serum of healthy donors. GPC3 expression is also found to be higher in HCC liver tissue than... (more)

Species: Mouse Monoclonal **Cat#:** Z2449

IHC: Human hepatocellular carcinoma stained with ZM138

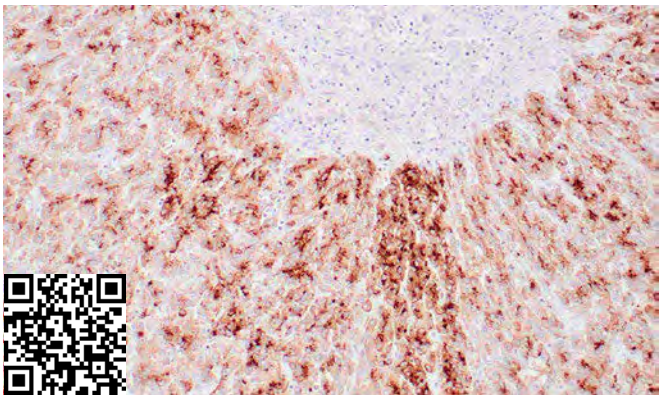


Glypican 3 (clone 1G12) IVD

1G12 monoclonal antibody has been used to assess GPC3 expression in malignant and nonmalignant liver tissue samples by immunohistochemistry in formalin-faxed and paraffin-embedded tissue. GPC3 is expressed at the protein level in most hepatocellular carcinomas, but it is undetectable in normal liver and benign hepatic lesions, including dysplastic and cirrhotic nodules. In addition GPC3 is significantly elevated... (more)

Species: Mouse Monoclonal **Cat#:** Z2103

IHC: Human hepatocellular carcinoma stained with 1G12

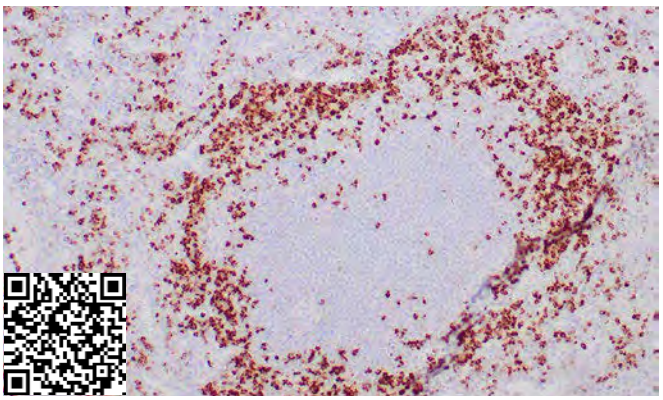


Granzyme B (clone ZR432) IVD; RUO(EU)

Granzyme B is a member of the granule serine protease family stored specifically in NK cells or cytotoxic T cells. Cytolytic T lymphocytes (CTL) and natural killer (NK) cells share the ability to recognize, bind, and lyse specific target cells. They are thought to protect their host by lysing cells bearing on their surface 'nonself' antigens, usually peptides or proteins resulting from infection by intracellular pathogens. Granzyme B is crucial for the rapid induction of target cell apoptosis by CTLs in the ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2788

IHC: Human tonsil stained with ZR432

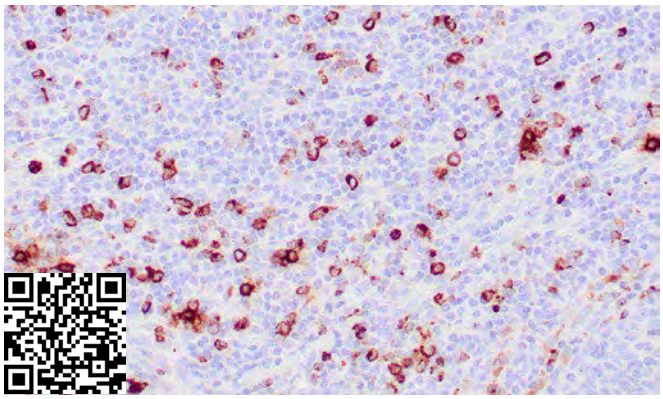


Granzyme B (clone ZM66) IVD

Granzyme B is crucial for the rapid induction of target cell apoptosis by CTLs in the cell-mediated immune response. Granzyme B is useful as a marker in the identification of NK/T-cell lymphomas. High percentages of cytotoxic T-cells have been shown to be an unfavorable prognostic indicator in Hodgkin's Disease. (more)

Species: Mouse Monoclonal **Cat:** Z2376

IHC: Human tonsil stained with ZM66

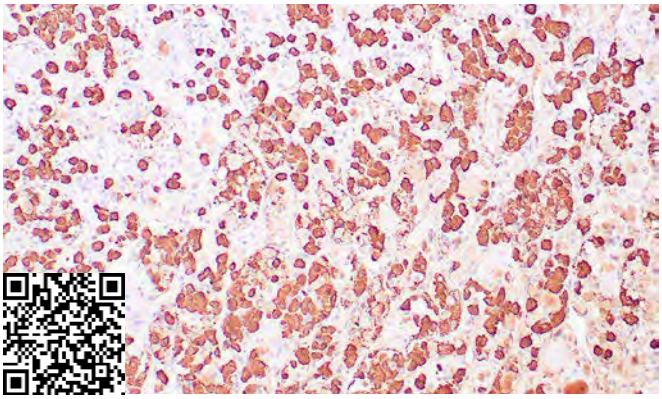


Growth Hormone (clone ZM140) IVD

Pituitary growth hormone (GH) plays a crucial role in stimulating and controlling the growth, metabolism and differentiation of many mammalian cell types by modulating the synthesis of multiple mRNA species. Anti-GH is a useful marker in classification of pituitary tumors and the study of pituitary disease (acromegaly). (more)

Species: Mouse Monoclonal **Cat#:** Z2451

IHC: Human pituitary stained with ZM140

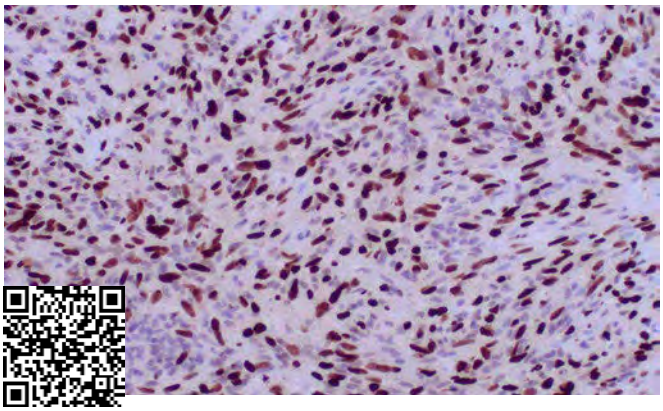


NEW H3.3G34W (clone ZR459) IVD

H3.3 is a variant of the histone H3 protein and H3.3 G34W refers to a specific mutation in the histone H3.3 protein. This mutation is significant in certain types of cancers, particularly pediatric gliomas and malignant giant cell tumor of bone. Clone ZR459 is a mutation-specific IHC stain against the G34W mutation in histone 3F3A. Nuclear immunoreactivity supports the diagnosis of giant cell tumor of bone (~95%) and some types of gliomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2820

IHC: Malignant giant cell tumor of bone stained with ZR459

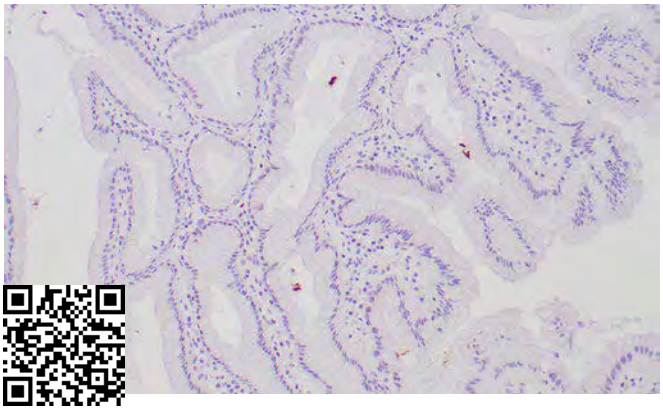


H. pylori (polyclonal) IVD

Helicobacter pylori is known to cause peptic ulcers and chronic gastritis in human. It is associated with duodenal ulcers and may be involved in development of adenocarcinoma and low-grade lymphoma of mucosa associated lymphoid tissue in the stomach.ma (CDC).

Species: Rabbit Polyclonal **Cat#:** Z2046

IHC: Human stomach stained with polyclonal anti-*H. pylori*

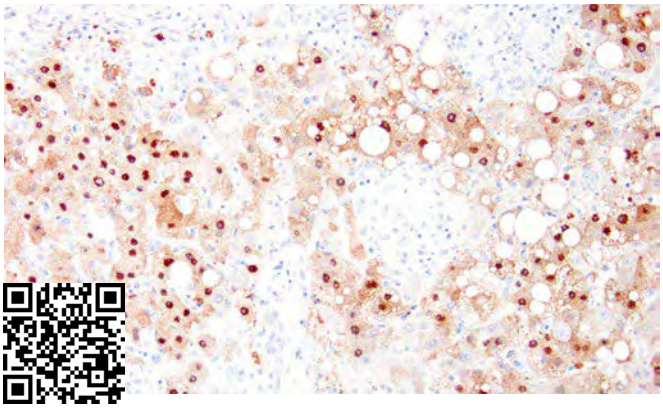


HBcAg (polyclonal) IVD

The antigenic activity of the nucleocapsid core is designated as hepatitis B core antigen. The antigens in the outer surface are called as hepatitis B virus surface antigens. Antibodies to surface antigens appear in circulation at an early stage of infection whereas the antibodies to the core antigens are detected after several weeks. (more)

Species: Rabbit Polyclonal **Cat:** Z2085

IHC: Human liver infected with hepatitis B virus stained with polyclonal anti-HBcAg

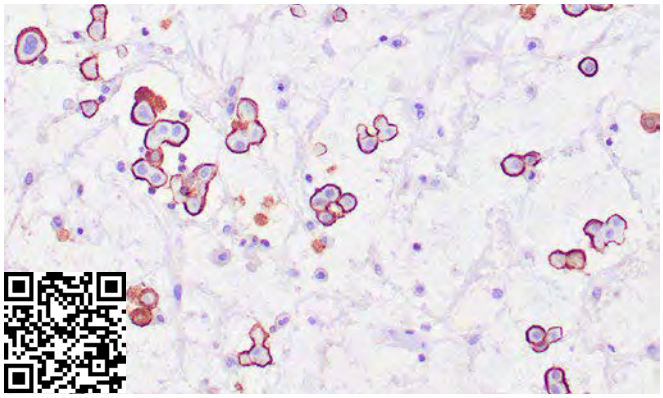


HBME-1 (clone HBME-1) IVD

Hector Battifora mesothelial-1 (HBME-1) is an anti-mesothelial monoclonal antibody that recognizes an unknown antigen on microvilli of mesothelioma cells. It stains normal mesothelial cells as well as epithelial mesotheliomas in a thick membrane pattern. This antibody also reacts with some (20-30%) carcinomas showing cytoplasmic immunostaining.

Species: Mouse Monoclonal **Cat#:** Z2233

IHC: Human mesothelioma stained with HBME-1

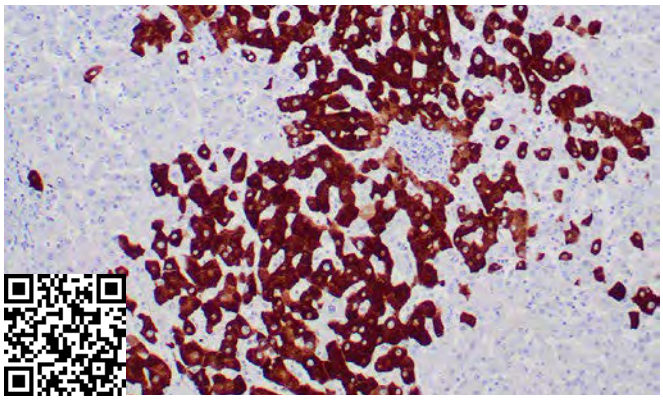


HBsAg (clone ZR393) RUO

Hepatitis B surface antigen (HBsAg) is a glycoprotein on the surface of the hepatitis B virus. After hepatitis B infection, HBsAg appears as the first viral marker. HBsAg can be detected in blood, saliva, breast milk, sweat, tears, nasopharyngeal secretions, semen, and vaginal secretions of patients 2 to 6 months after infection with HBV. HBsAg antibodies are mainly used for the diagnosis of the hepatitis B virus.

Species: Rabbit Monoclonal **Cat#:** Z2749

IHC: Human liver infected by Hep B virus stained with ZR393

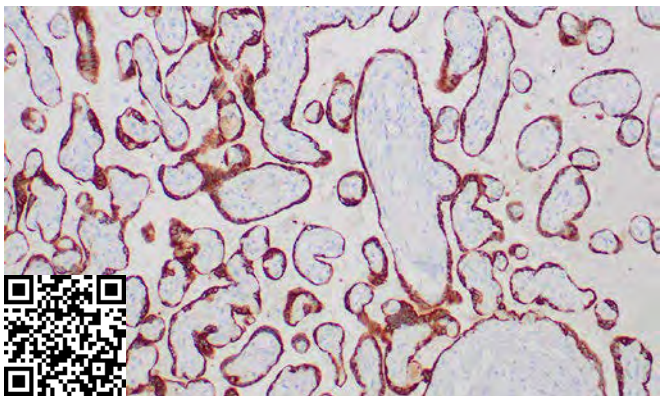


HCG (clone ZR362) IVD

Human chorionic gonadotropin (hCG) is a glycoprotein hormone synthesized in syncytiotrophoblastic cells of the placenta and certain trophoblastic tumors. HCG is found in moles and choriocarcinoma, chorionic components of germ cell tumors, and syncytiotrophoblast-like cells in seminoma/dysgerminoma and embryonal carcinoma. In diagnostic pathology, hCG is a valuable marker for classifying germ cell tumors and identifying extragonadal germ cell tumors. (more)

Species: Rabbit Monoclonal **Cat#:** Z2738

IHC: Human placenta stained with ZR362

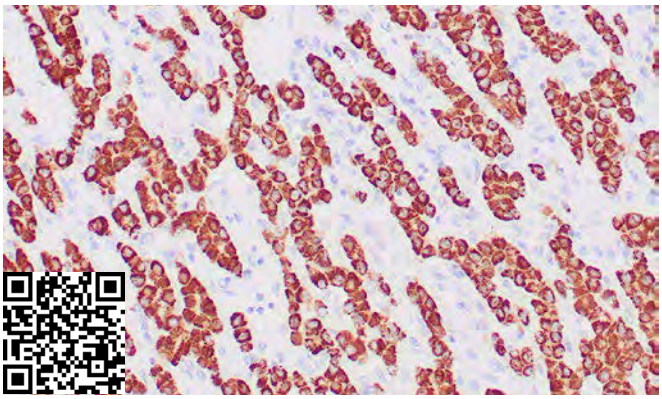


HepPar-1 (clone OCH1E5) IVD

Clone OCH1E5 is useful in studying hepatocellular tumors. It may be useful in differentiating clear cell hepatocellular carcinomas from other clear cell malignancies. It has been shown in the literature to be useful in differentiating hepatoblastoma of embryonal type from small round cell tumors of childhood. OCH1e5 labels an antigen in the mitochondrial fraction of the liver homogenates.

Species: Mouse Monoclonal **Cat#:** Z2087

IHC: Human liver stained with OCH1E5

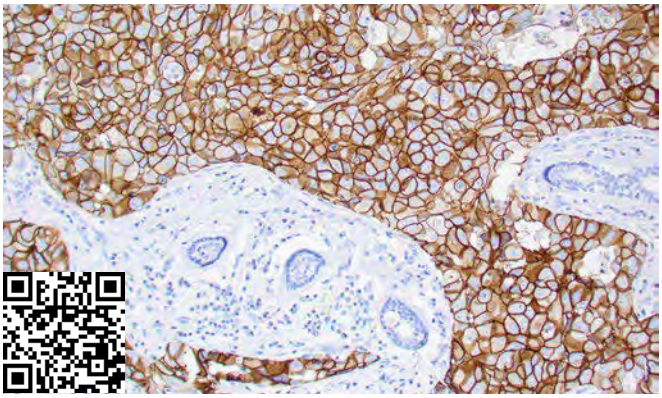


Her-2/neu (clone ZR5) ASR/RUO

c-erbB-2 is a receptor tyrosine kinase of the c-erbB family. It is closely related in structure to the epidermal growth factor receptor. c-erbB-2 oncoprotein is detectable in a proportion of breast and other adenocarcinomas, as well as transitional cell carcinomas. In the case of breast cancer, expression determined by immunohistochemistry has been shown to be associated with poor prognosis.

Species: Rabbit Monoclonal **Cat#:** Z2025

IHC: Human breast infiltrating ductal carcinoma stained with ZR5

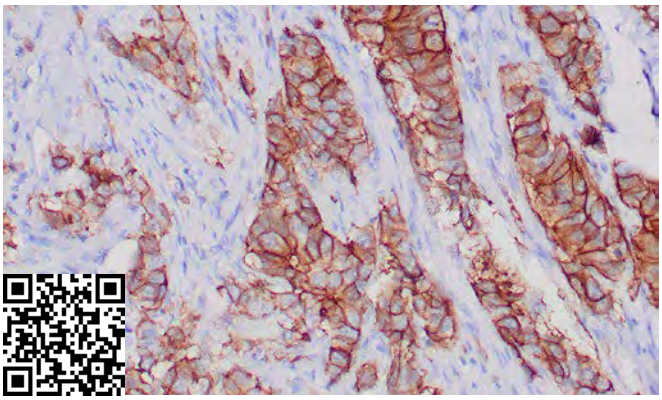


Her-2/neu (clone ZR218) ASR

C-erbB-2/HER-2 is a member of the EGFR family. This MAb is specific and shows minimal cross-reaction with other members of the EGFR-family. Receptors of this family are located on the plasma membrane and consist of an extracellular ligand-binding domain connected to a large intracellular domain by a single transmembrane sequence. c-erbB-2/HER-2 protein is over-expressed in various carcinomas, especially the breast and ovary.

Species: Rabbit Monoclonal **Cat#:** Z2499

IHC: Breast infiltrating ductal carcinoma stained with ZR218

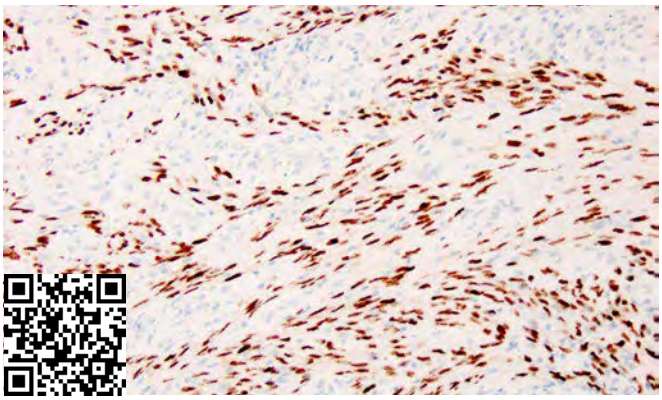


HHV-8 (clone ZR106) ASR/IVD

HHV8 encodes a latent nuclear antigen (LNA), which is the product of the viral gene orf 73. HHV8 is associated with three different diseases observed in AIDS patients; Kaposi's sarcoma, primary effusion lymphoma (which is a rare type of non-Hodgkin lymphoma affecting the body cavities) and multicentric Castleman's disease. HHV8 is the likely etiological agent of Kaposi's sarcoma. (more)

Species: Rabbit Monoclonal **Cat:** Z2531

IHC: Human Kaposi's sarcoma stained with ZR106

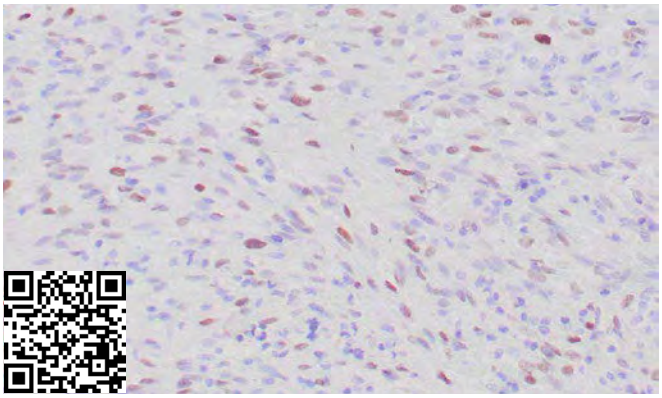


HHV-8 (clone LN53) IVD

HHV8 encodes a latent nuclear antigen (LNA), which is the product of the viral gene orf 73. HHV8 is associated with three different diseases observed in AIDS patients; Kaposi's sarcoma, primary effusion lymphoma (which is a rare type of non-Hodgkin lymphoma affecting the body cavities) and multicentric Castleman's disease. HHV8 is the likely etiological agent of Kaposi's sarcoma. (more)

Species: Mouse Monoclonal **Cat:** Z2650

IHC: Human Kaposi's sarcoma stained with LN53

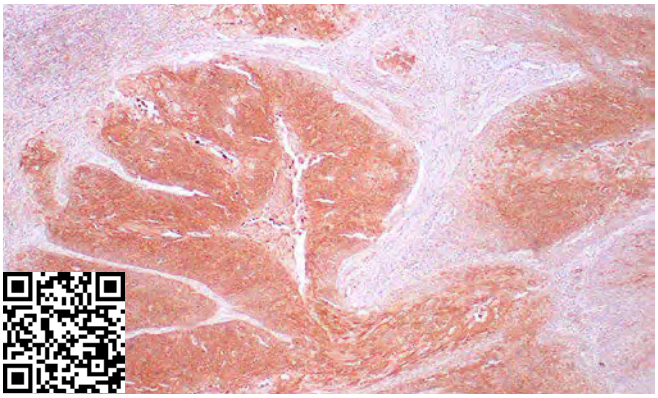


HPV (clone CAMVR-1 & C1P5) ASR/RUO

Human papilloma viruses (HPVs) can be classified as either high risk or low risk according to their association with cancer. Approximately 90% of cervical cancers contain HPV DNA of the high-risk types. Mutational analysis has shown that the E6 and E7 genes of the high-risk HPVs are necessary and sufficient for HPV transforming function. The antibody reacts very strongly with FFPE tissues containing HPV-16, -18 or -33. (more)

Species: Mouse Monoclonal **Cat#:** Z2657

IHC: Cervical carcinoma stained with CAMVR-1+C1P5

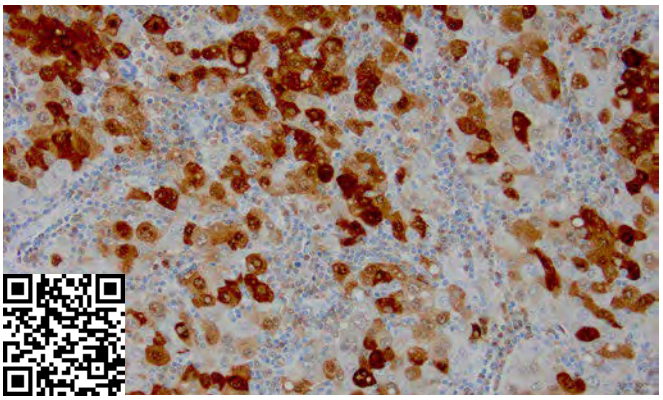


HSP70 (clone ZR152) IVD

In conjunction with other heat shock proteins, 70kDa HSP70 stabilizes existing proteins against aggregation and mediates the folding of newly translated proteins in the cytosol and organelles. It is also involved in the ubiquitin-proteasome pathway through interaction with the AU-rich element RNA-binding protein 1. The gene is located in the major histocompatibility complex class III region, in a cluster with two closely related genes that encode similar proteins.

Species: Rabbit Monoclonal **Cat#:** Z2694

IHC: Human hepatocellular carcinoma stained with ZR152

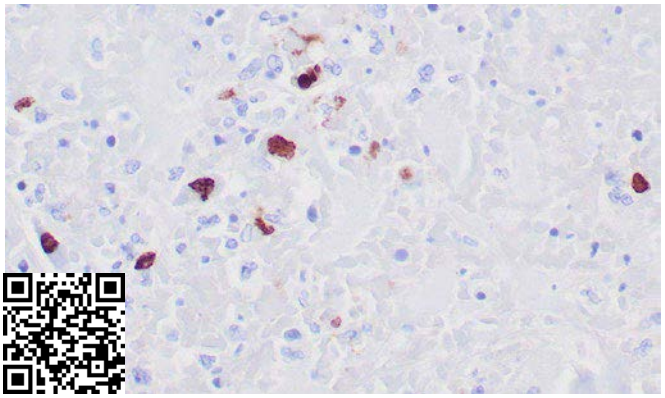


HSV-1 (clone 10A3) ASR/IVD

The antibody reacts with HSV type 1 specific antigens and with antigens common for HSV types 1 and 2, and reacts with all the major glycoproteins present in the viral envelope and at least one core protein as determined by crossed immunoelectrophoresis. It is well-suited for detection of HSV in human cellular material obtained from superficial lesions or biopsies and for the early identification of HSV in infected tissue cultures.

Species: Mouse Monoclonal **Cat:** Z2215

IHC: Human skin with HSV infection stained with 10A3



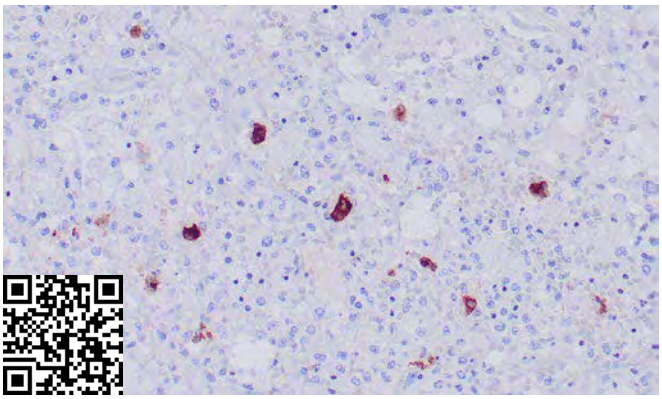
HSV-2 (clone 0192)

ASR/RUO

The antibody reacts with HSV type 2 specific antigens and with antigens common for HSV types 1 and 2. The antibody reacts with all the major glycoproteins present in the viral envelope and at least one core protein as determined by crossed immunoelectrophoresis. It is well-suited for detection of HSV in human cellular material obtained from superficial lesions or biopsies and for the early identification of HSV in infected tissue cultures.

Species: Mouse Monoclonal **Cat:** Z2831

IHC: Human lung with HSV infection stained with 0192



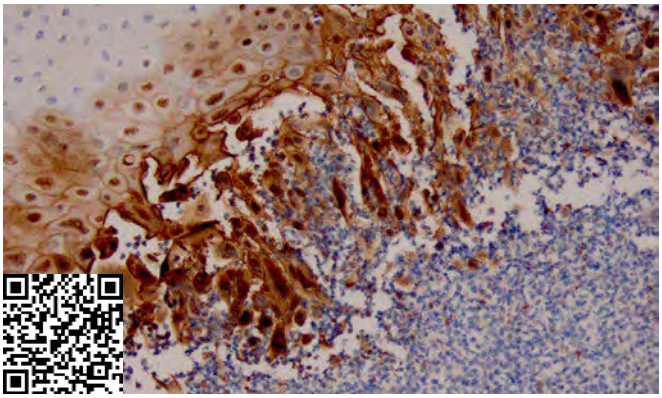
NEW HSV 1/2 Cocktail

IVD; RUO(EU)

The HSV 1 strain generally appears in the orofacial organs. HSV 2 usually resides in the sacral ganglion at the base of the spine. The antibody cocktail reacts with HSV type 1 and type 2 specific antigens common for HSV types 1 and 2. It is well-suited for detecting HSV in human cellular and tissue materials obtained from superficial lesions or biopsies and for the early identification of HSV in infected tissue. (more)

Species: Rabbit Monoclonal **Cat:** Z2814

IHC: Esophagus with HSV infection stained with anti-HSV 1/2 cocktail using perox. conjugate and DAB chromogen.



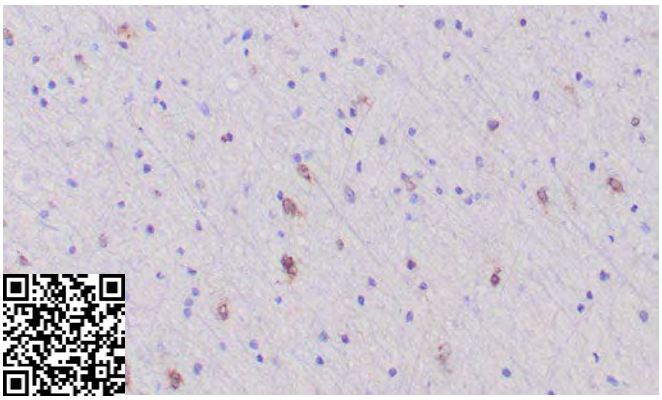
IDH1 (R132H) (clone ZR7)

IVD

IDH1 R132H point mutations are frequently seen in WHO grade II and III gliomas, an early step in tumorigenesis. IDH1 R132H can be used as a diagnostic marker to help differentiate infiltrating gliomas from gliosis and as a prognostic marker for gliomas and secondary glioblastoma multiforme. IDH1 R132H antibody shows strong cytoplasmic staining and weaker nuclear staining in tumor cells with the R132H-mutated peptide. Diffuse staining of the fibrillary tumor matrix is also seen.

Species: Rabbit Monoclonal **Cat#:** Z2010

IHC: Human glioma stained with ZR7



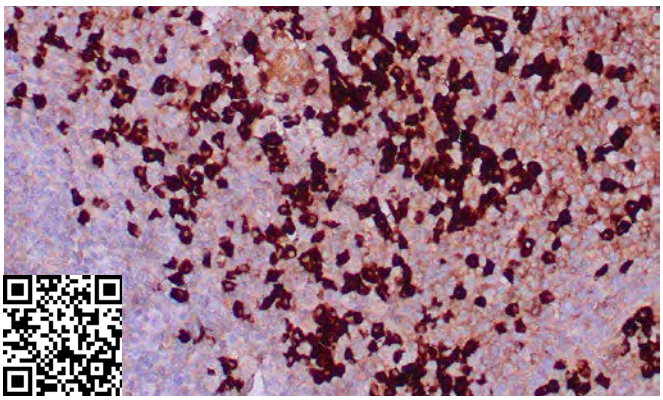
IgA (clone ZR291)

IVD

This MAb is specific to heavy chain of IgA and shows minimal cross-reaction with heavy chains of other immunoglobulins. IgA exists mainly in dimers but can also exist as polymers or as monomers. The most common feature of plasmacytomas, and certain non-Hodgkin's lymphomas is the restricted expression of a single heavy chain class. Demonstration of clonality in lymphoid infiltrates indicates that the infiltrate is clonal and therefore malignant. (more)

Species: Rabbit Monoclonal **Cat#:** Z2729

IHC: Human tonsil stained with ZR291

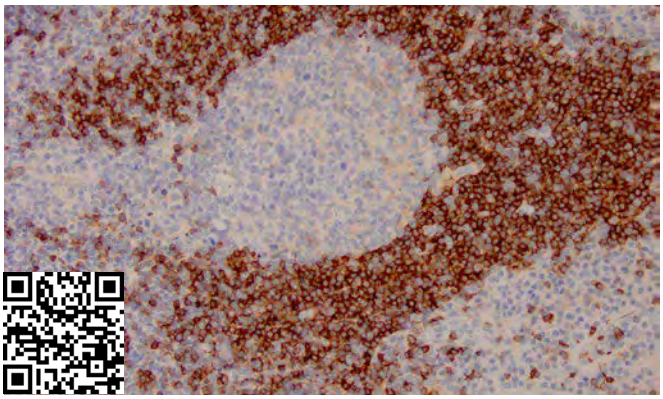


IgD (clone ZR156) IVD

Immunoglobulin D (IgD) plays a biological role as a trans-membrane receptor molecule, co-expressed with IgM on the surface of mature/naive B cells. In particular, it is found on spleen B cell surfaces. Compared to IgM, IgD exists in much lower numbers and is not expressed in immature B cells. IgD surface expression on B cells is regulated in part by IL-27. In mice, the inhibition of this immunoglobulin isotype does not cause a significant change to the immune system.

Species: Rabbit Monoclonal **Cat#:** Z2696

IHC: Human lymph node stained with ZR156

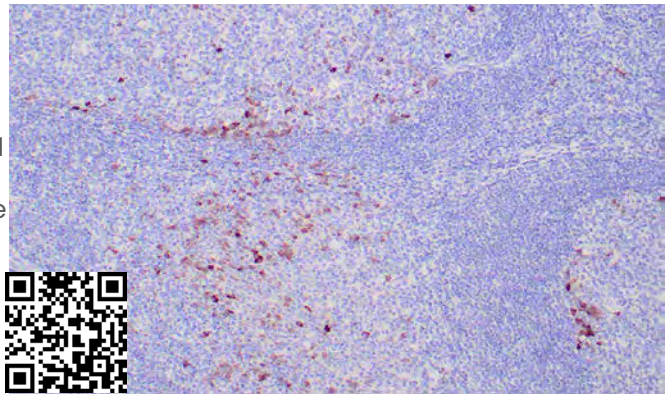


IgG (clone ZR247) IVD

Recognizes 75kDa gamma heavy chain of human immuno-globulins. Does not cross-react with IgAm -M, -E, -D, heavy chains, T-cells, monocytes, granulocytes, or erythrocytes. Useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin s lymphomas. The most common feature of these malignancies is the restricted expression of a single heavy chain class. Demonstration of clonality in lymphoid infiltrates indicates that the infiltrate is clonal and therefore malignant.

Species: Rabbit Monoclonal **Cat#:** Z2722

IHC: Human tonsil stained with ZR247

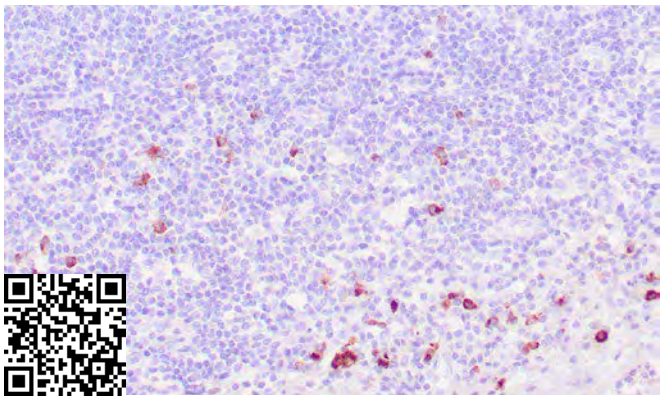


IgG4 (clone ZR299) IVD

IgG4-related sclerosing disease has been recognized as a systemic disease entity characterized by an elevated serum IgG4 level, sclerosing fibrosis, and diffuse lympho-plasmacytic infiltration with the presence of many IgG4-positive plasma cells. IgG4 is overexpressed in inflammatory pseudo-tumor (IPT) and under expressed in inflammatory myofibroblastic tumor (IMT). In pulmonary nodular lymphoid hyperplasia (PNLH), there are an increased number of IgG4+ plasma cells. (more)

Species: Rabbit Monoclonal **Cat#:** Z2614

IHC: Human tonsil stained with ZR299

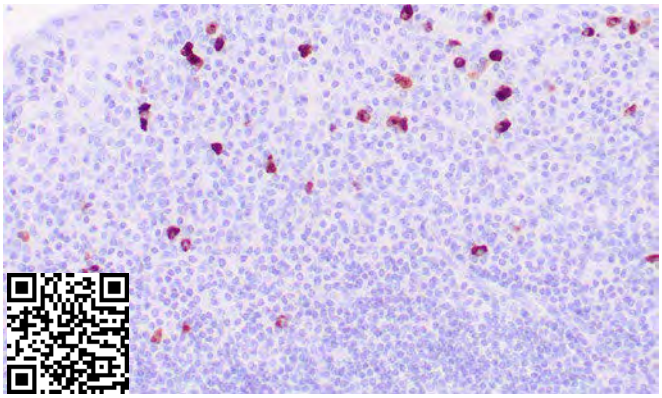


IgG4 (clone ZM56) IVD

IgG4-related sclerosing disease is recognized as a systemic disease entity characterized by an elevated serum IgG4 level, sclerosing fibrosis, and diffuse lympho-plasmacytic infiltration with the presence of many IgG4-positive plasma cells. IgG4 is overexpressed in inflammatory pseudo-tumor (IPT) and under expressed in inflammatory myofibroblastic tumor (IMT). In pulmonary nodular lymphoid hyperplasia (PNLH), there are an increased number of IgG4+ plasma cells. (more)

Species: Mouse Monoclonal **Cat#:** Z2366

IHC: Human salivary gland stained with ZM56

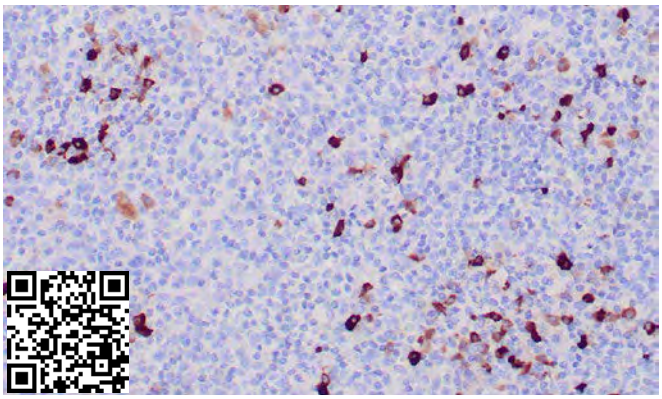


IgM (clone ZR249) IVD

Recognizes mu heavy chain of human immunoglobulins. It does not cross-react with IgA, IgG, IgE, or IgD, heavy chains, T-cells, monocytes, granulocytes, or erythrocytes. This antibody is useful in identifying leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Aberrant levels are associated with immune deficiency states, hereditary deficiencies, myeloma, Waldenstrom's macroglobulinemia, chronic infection, and hepatocellular disease. (more)

Species: Rabbit Monoclonal **Cat#:** Z2723

IHC: Human tonsil stained with ZR249

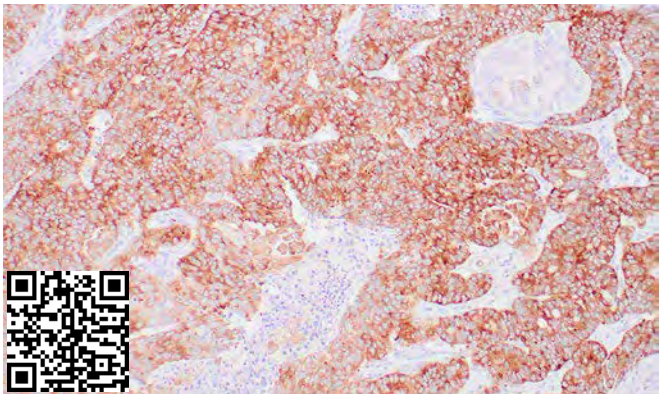


IMP-3 (clone EP286) IVD

IMP3 plays a major role in early embryogenesis involving the development of the intestine, thymus, pancreas, and kidneys. IMP3 mRNA transcript and protein have been demonstrated in high levels in pancreatic cancer tissues but not in benign lesions of the pancreas, chronic pancreatitis, or normal pancreatic tissues. IMP3 can be used to distinguish between pancreatic ductal adenocarcinoma from chronic sclerosing pancreatitis. (more)

Species: Rabbit Monoclonal **Cat#:** Z2284

IHC: Pancreatic ductal adenocarcinoma stained with EP286

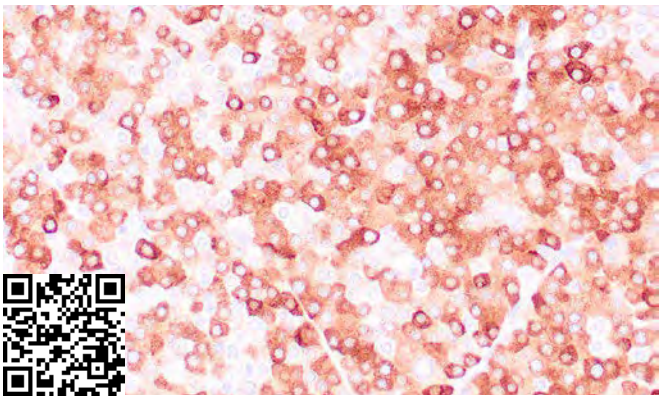


Inhibin-α (clone ZM113) IVD

Antibodies against Inhibin are useful in making a differentiation between adrenal cortical tumors and renal cell carcinoma. Sex cord stromal tumors of the ovary as well as trophoblastic tumors also demonstrate cytoplasmic positivity. Inhibin antibody is also used to make the differential diagnosis of intra-uterine vs. ectopic pregnancy in endometrial curetting.

Species: Mouse Monoclonal **Cat#:** Z2413

IHC: Human adrenal cortical tumor stained with ZM113

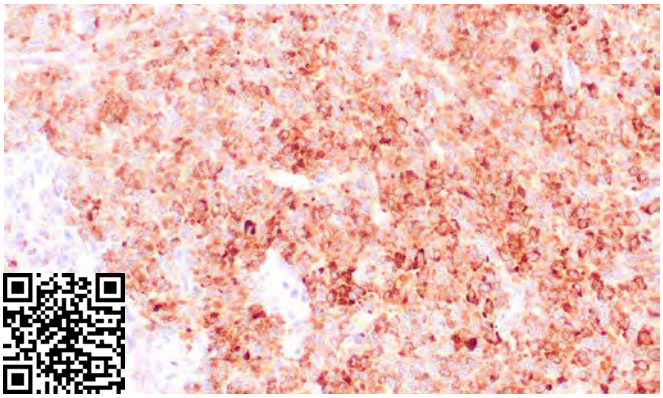


Inhibin-α (clone R1) IVD

Inhibin is a dimeric glycoprotein hormone from TGF-beta family made up of alpha and beta subunits. It inhibits the production of follicle-stimulating hormone from pituitary while actively stimulates the production of FSH. It is suggested that inhibin may act as a gonadal tumor suppressor.

Species: Mouse Monoclonal **Cat#:** Z2115

IHC: Human granulosa cell tumor stained with R1

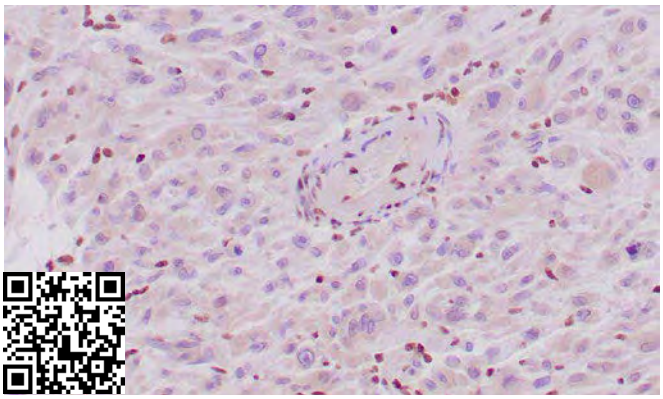


INI-1 (clone ZR282) IVD

The protein encoded by this gene is part of a complex that relieves repressive chromatin structures, allowing the transcriptional machinery to access its targets more effectively. This gene has been found to be a tumor suppressor, which is often mutated or deleted in malignant rhabdoid tumors, epithelioid sarcoma, and some malignant peripheral nerve sheath (MPNST) tumors. (more)

Species: Rabbit Monoclonal **Cat:** Z2597

IHC: Human epithelioid sarcoma stained with ZR282

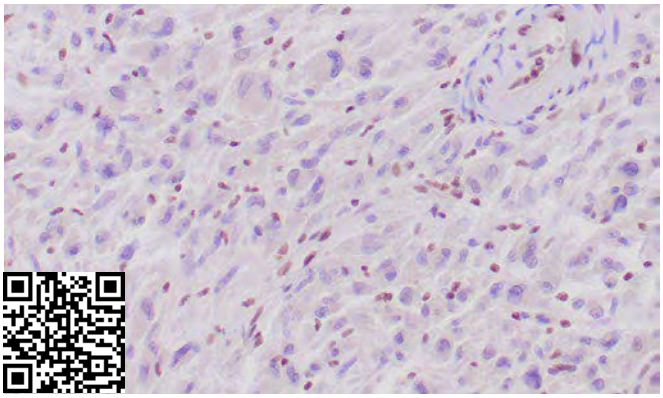


INI-1 (clone 25) IVD

Two isoforms of INI-1, that differ by the variable inclusion of amino acids, potentially are produced by differential RNA splicing. The morphology of MRTs can present challenges in differential diagnosis. The overall survival of MRTs relative to its potential mimics (medulloblastoma, supratentorial primitive neuroectodermal tumors (sPNETs)) is quite low, and thus differentiation from these other tumors is desirable. Lack of... (more)

Species: Mouse Monoclonal **Cat#:** Z2177

IHC: Human epithelioid sarcoma stained with clone 25

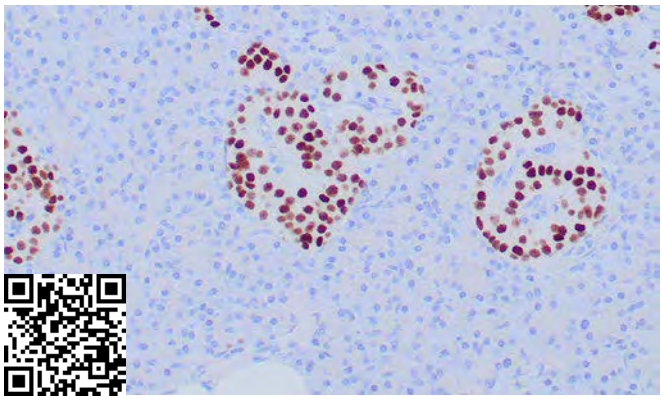


INSM1 (clone ZR395) IVD; RUO(EU)

Insulinoma-associated protein 1 (INSM1) is a developmentally regulated zinc-finger transcription factor. It localizes to the nucleus and is expressed in embryonic tissues undergoing neuroendocrine differentiation. INSM1 is not expressed in normal adult tissues but can be found highly expressed in neuroendocrine tumors. INSM1 is positive in 95% of lung small cell carcinoma and 91% of lung large cell neuroendocrine carcinoma, compared with 75% and 78% with the combined panel of ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2751

IHC: Human pancreas stained with ZR395

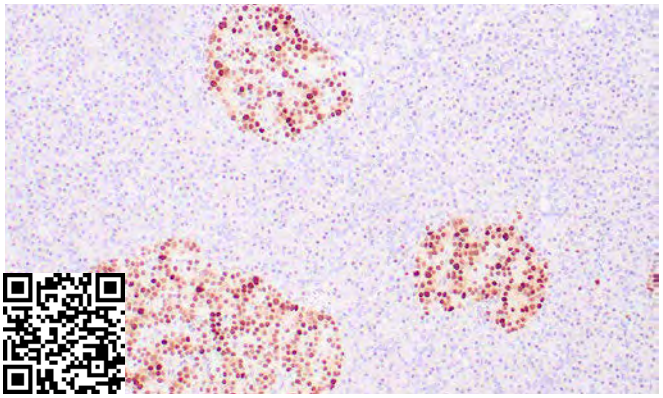


INSM1 (clone A8) IVD

Insulinoma-associated 1 (INSM1) gene encodes a protein containing both a zinc finger DNA-binding domain and a putative prohormone domain. It localizes to the nucleus and is expressed in embryonic issues undergoing neuroendocrine differentiation. It is a sensitive marker for neuroendocrine tumors of various origins, including lung, GI, and pancreas. INSM1 is sensitive and specific to be a single first-line pan-neuroendocrine marker. (more)

Species: Mouse Monoclonal **Cat#:** Z2330

IHC: Human pancreas stained with A8

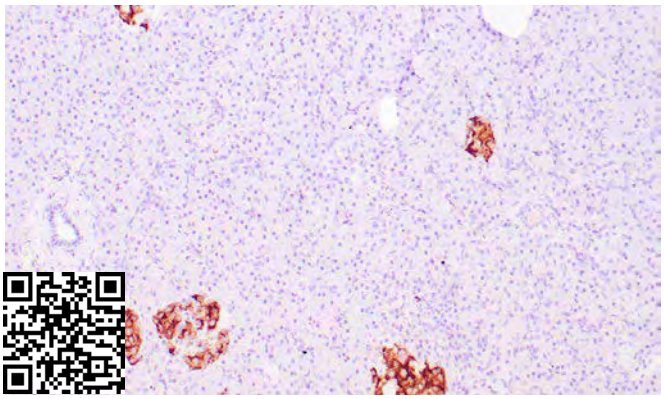


Insulin (clone ZM83a & ZM83b) IVD

Recognize a polypeptide which is identified as insulin, a 51-amino acid polypeptide composed of A and B chains connected through the C-peptide. Proinsulin, which has very little biological activity, is cleaved by proteases within its cell of origin into the insulin molecule and the C-terminal basic residue. Insulin enhances membrane transport of glucose, amino acids, and certain ions. Antibodies to insulin are important as beta-cell and insulinoma marker. (more)

Species: Mouse Monoclonal **Cat:** Z2525

IHC: Human pancreas stained with ZM83a & ZM83b

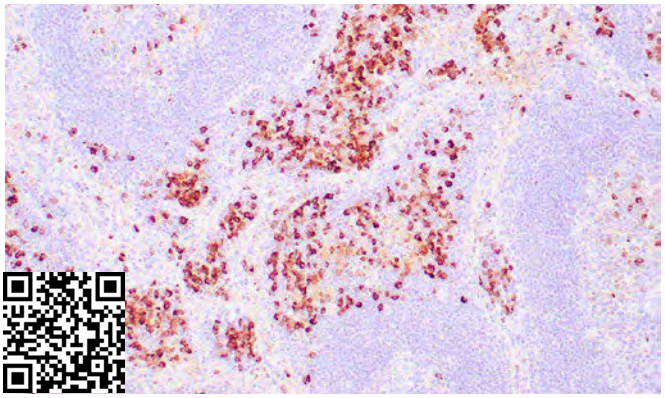


Kappa (clone ZM81) IVD

This MAb is specific to kappa light chain of immunoglobulin and shows no cross-reaction with lambda light chain or any of the five heavy chains. It recognizes human Ig kappa light chains of both secreted and cell surface immunoglobulin. It detects also free kappa light chains. Antibody to the kappa light chain is useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2532

IHC: Human tonsil stained with ZM81

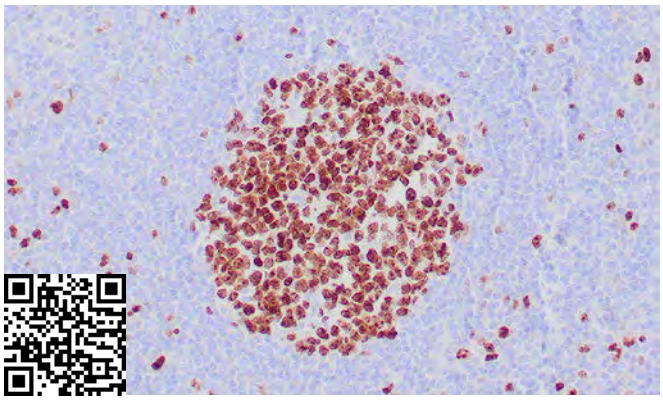


Ki-67 (clone ZR433) IVD; RUO(EU)

Ki-67 antigen is a nuclear, non-histone protein that is present in all stages of the cell cycle except G0. This characteristic makes Ki-67 an excellent marker for proliferating cells and is commonly used as one of the prognostic factors in cancer studies. A correlation has been demonstrated between Ki-67 index and the histo-pathological grade of neoplasms. Assessment of Ki-67 expression in renal and ureter tumors shows a correlation between tumor proliferation and disease progression, thus making it possible to differentiate high-risk patients. Ki-67 expression may also prove to ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2789

IHC: Human tonsil stained with ZR433

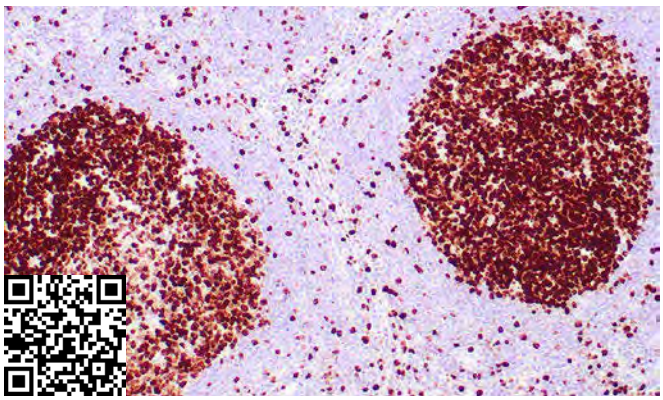


Ki-67 (clone ZM67) IVD

Ki-67 is an excellent marker for proliferating cells and is commonly used as one of the prognostic factors in cancer studies. A correlation has been demonstrated between Ki-67 index and the histo-pathological grade of neoplasms. Assessment of Ki-67 expression in breast and neuroendocrine tumors shows a correlation between tumor proliferation and disease progression, thus making it possible to differentiate high-risk patients. (more)

Species: Mouse Monoclonal **Cat:** Z2377

IHC: Human lymph node stained with ZM67

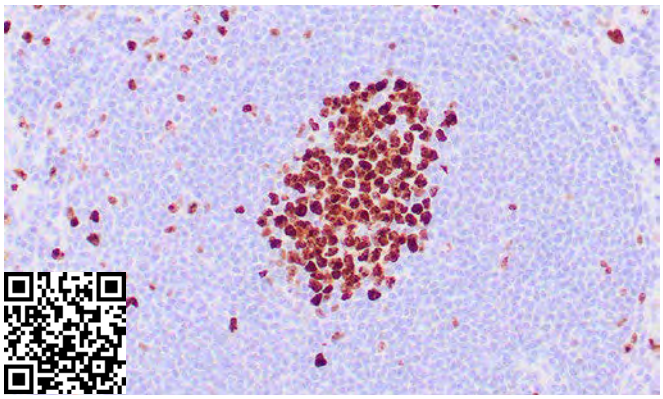


Ki-67 (clone MIB-1) IVD

The Ki-67 protein plays a pivotal role in maintaining cell proliferation. In diagnostic histopathology and cell biology, the antibody has proven valuable for the demonstration of the Ki-67 antigen in normal and neoplastic cells, for example in soft-tissue sarcoma, prostatic adenocarcinoma, and breast carcinoma. In breast cancer, the proliferative index measured by Ki-67 immunoreactivity has both prognostic and predictive value. (more)

Species: Mouse Monoclonal **Cat#:** Z2305

IHC: Human tonsil stained with MIB-1

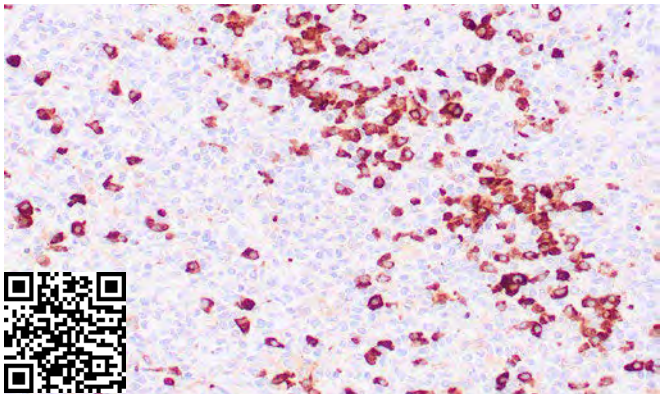


Lambda (LcN-2) IVD

This MAb is specific to lambda light chain of immunoglobulin and shows no cross-reaction with kappa light chain or any of the five heavy chains. The ratio of Kappa to Lambda is 70:30. However, with the occurrence of multiple myeloma or other B-cell malignancies this ratio is disturbed. Antibody to the lambda light chain is reportedly useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's... (more)

Species: Mouse Monoclonal **Cat#:** Z2457

IHC: Human tonsil stained with LcN-2

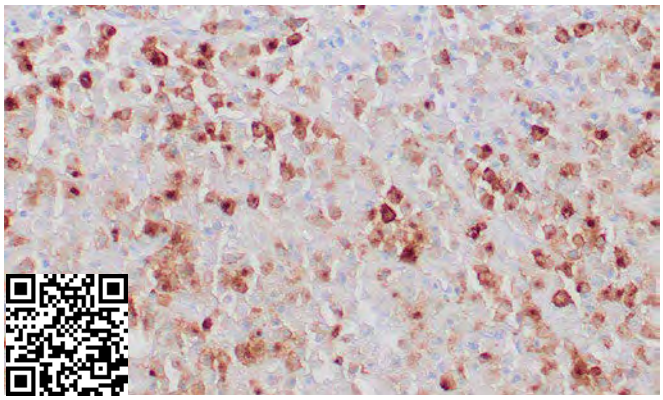


Langerin (ZR170) IVD; RUO(EU)

Langerhans cells (LCs) are a subset of immature dendritic cells (DCs) that specifically localize in the epidermis and other mucosal epithelia. Epidermal LCs possess a strong immuno-stimulatory capacity and play a central role in initiating and regulating immune responses. Langerin (CD207) is a Ca2+-dependent, C-type lectin domain containing type II transmembrane protein that induces epidermal LCs to differentiate into ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2700

IHC: Human Langerhans cell histiocytosis stained with ZR170

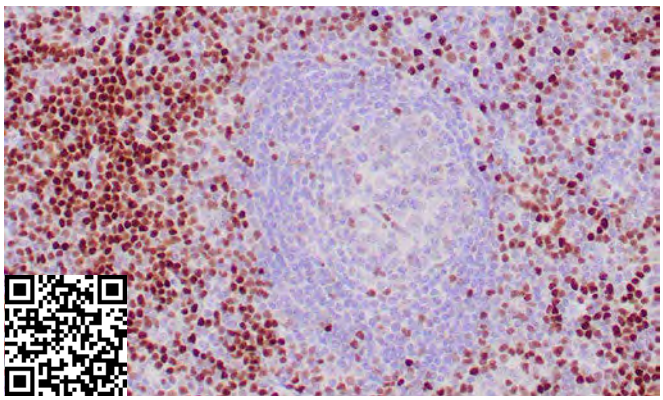


LEF1 (clone ZR336) IVD

LEF1 is an important factor in lymphopoiesis and expressed normally in T and pro-B cells but not expressed in mature B cells. Strong nuclear expression of LEF1 is observed in chronic lymphocytic leukemia/small lymphocytic lymphoma cases and LEF1 is not detected in other small B cell lymphomas. Anti-LEF1 is used as an aid for differentiation of chronic lymphocytic leukemia/small lymphocytic lymphoma from other small B cell lymphomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2642

IHC: Human tonsil stained with ZR336

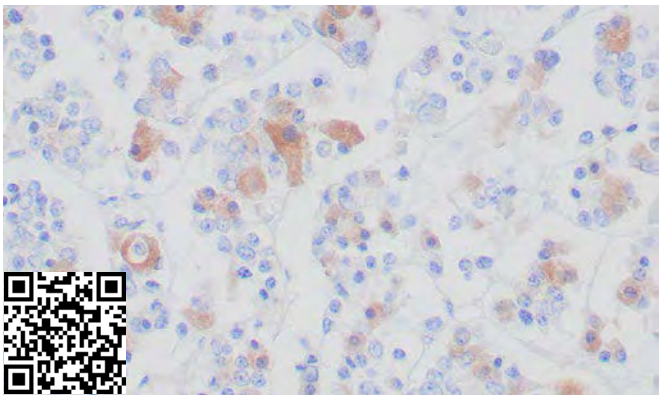


LH (clone ZR173) IVD

LH is a useful marker in the classification of pituitary tumors and the study of pituitary disease. It is synthesized and secreted by gonadotrophs in the anterior lobe of the pituitary gland. With the other pituitary gonadotropin follicle-stimulating hormone (FSH), it is necessary for proper reproductive function. In the female, an acute rise of LH levels triggers ovulation. In the male, where LH has also been called Interstitial Cell-Stimulating Hormone (ICSH), it stimulates ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2701

IHC: Human pituitary stained with ZR173

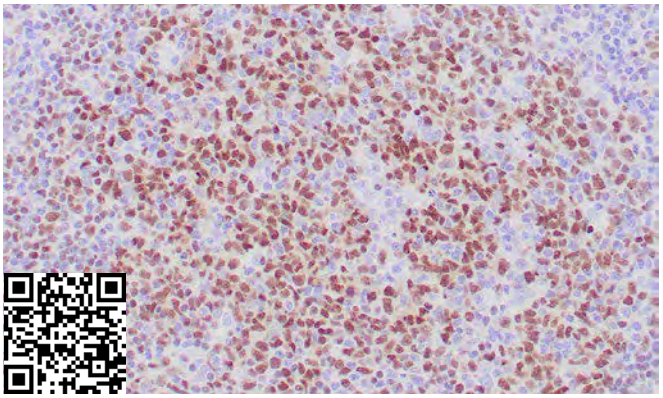


LMO-2 (clone ZR87) IVD

The LMO2 protein has a central and crucial role in hematopoietic development and in normal and lymphatic endothelial cells involving the regulation of angiogenesis and lymph-angiogenesis. Anti-LMO2 is valuable as a tool in the identification of lymphomas of B-cell origin. LMO2 is useful in differentiating follicular lymphoma (LMO2+) from nodal marginal zone lymphoma (LM02-). It also is positive in Hodgkins and Burkitts lymphomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2397

IHC: Human lymph node stained with ZR87

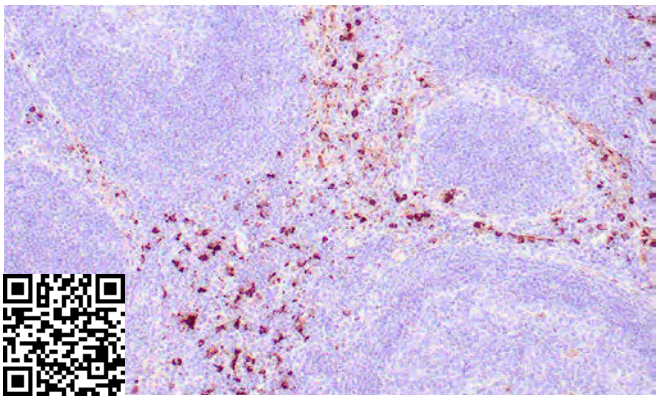


Lysozyme (clone ZM120) IVD

Lysozyme is one of the antimicrobial agents found in human milk, and is also present in spleen, lung, kidney, white blood cells, plasma, saliva, and tears. The protein has antibacterial activity against a number of bacterial species. This antibody labels myeloid cells, histiocytes, granulocytes, macrophages and monocytes. It is helpful in the identification of myeloid or monocytic nature of acute leukemia. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2425

IHC: Human lymph node stained with ZM120

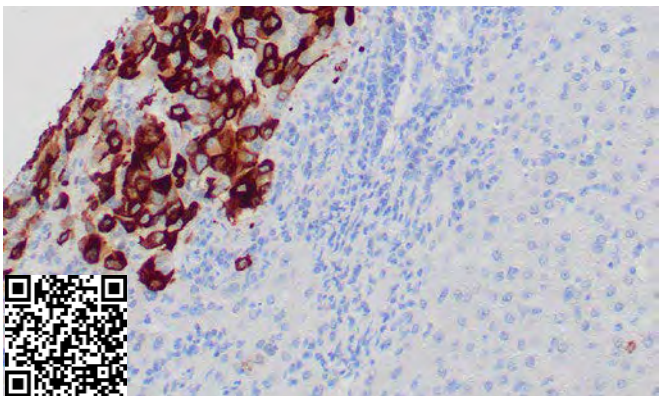


Mammaglobin (clone ZR363)

Mammaglobin is a cytoplasmic protein, a mammary-specific member of the uteroglobin family, related to a family of epithelial secretory proteins including prostatein and Clara cell protein. It occurs in about 80% of breast carcinomas. Up to 15% of nonbreast carcinomas (such as stomach, lung, colon, hepatobiliary, thyroid, ovarian, and urothelial carcinomas) have been reported positive, usually only focally. It is a sensitive and fairly specific marker for breast carcinoma. (more)

Species: Rabbit Monoclonal **Cat#:** Z2739

IHC: Metastatic breast carcinoma stained with ZR363

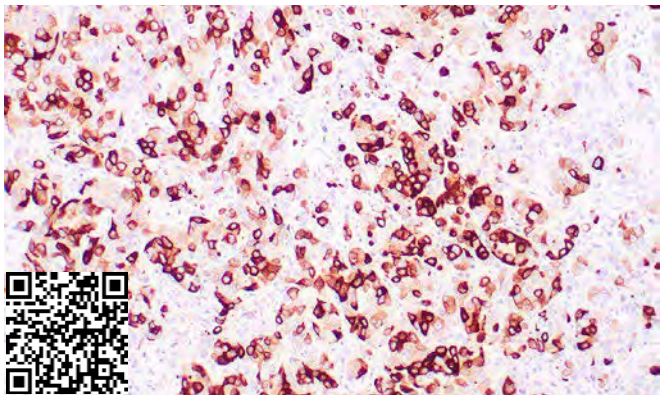


Mammaglobin (clone 304-1A5) IVD

In normal breast tissue, 304-1A5 labels breast ductal and lobular epithelial cells. In tumor cells, it is reactive with all types of breast adenocarcinoma regardless tumor differentiation and types. Adenocarcinomas from other organs rarely express mammaglobin. Mammaglobin is a breast-associated glycoprotein distantly related to secretoglobin family that includes human uteroglobin and lipophilin. Unlike other secretoglobin family members... (more)

Species: Mouse Monoclonal **Cat#:** Z2007

IHC: Human breast carcinoma stained with 304-1A5

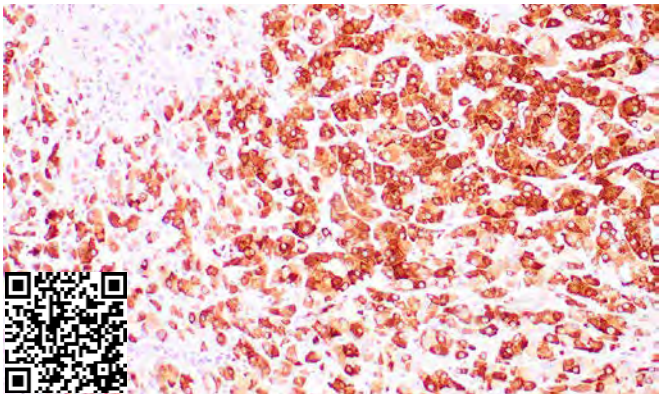


Mammaglobin (clone 31-A5) IVD

In normal breast tissue, 31A5 labels breast ductal and lobular epithelial cells. In tumor cells, it is reactive with all types of breast adenocarcinoma regardless tumor differentiation and types. Adenocarcinomas from other organs rarely express mammaglobin. Mammaglobin is a breast-associated glycoprotein distantly related to secretoglobin family that includes human uteroglobin and lipophilin Unlike other secretoglobin family members... (more)

Species: Rabbit Monoclonal **Cat:** Z2009

IHC: Human breast carcinoma stained with 31-A5

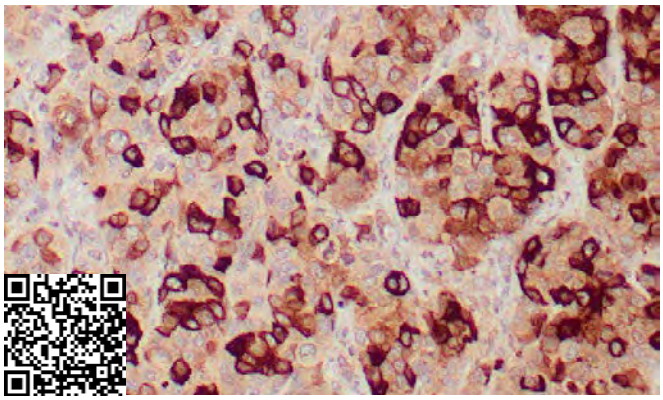


Mammaglobin Cocktail IVD
(clone 304-1A5 + 31-A5)

In normal breast tissue, 304-1A5 and 31A5 labels breast ductal and lobular epithelial cells. In tumor cells, it is reactive with all types of breast adenocarcinoma regardless tumor differentiation and types. Adenocarcinomas from other organs rarely express mammaglobin. Cellular localization: cytoplasmic. Mammaglobin is a breast-associated glycoprotein distantly related to secretoglobin family that... (more)

Species: Mouse and Rabbit Monoclonal **Cat#:** Z2011

IHC: Human breast carcinoma stained with 304-1A5+31-A5

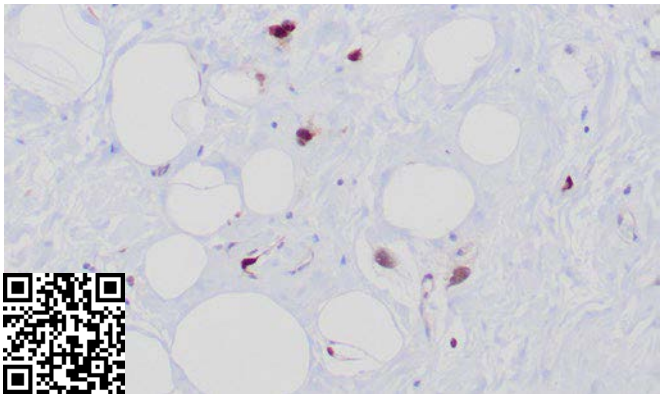


MDM2 (clone ZR258) IVD; RUO(EU)

MDM2 binds and inhibits transactivation by tumor protein p53. It can promote tumor formation by targeting tumor suppressor proteins, i.e. p53, for proteasomal degradation. Overexpression of MDM2 can result in excessive inactivation of p53, diminishing its tumor suppressor function. It also affects the cell cycle, apoptosis, and tumorigenesis through interactions with other proteins, including retinoblastoma 1 and ribosomal protein L5. Overexpression of MDM2 protein is detected in a variety of cancers.

Species: Rabbit Monoclonal **Cat#:** Z2572

IHC: Human atypical lipomatous tumor stained with ZR258

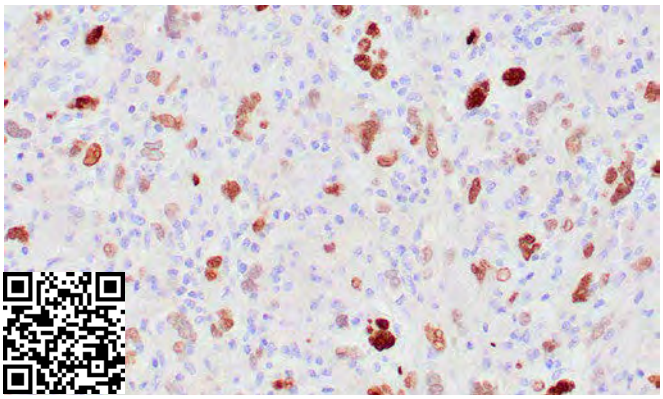


MDM2 (clone SMP14) IVD

The MDM2 (murine double minute-2) protein was initially identified as an oncogene in a murine transformation system. MDM2 functions to bind p53 and block p53-mediated transactivation of co-transfected reporter constructs. The MDM2 gene is amplified in a high percentage of human sarcomas that retain wide type p53 and tumor cells that overexpress MDM2 can tolerate high levels of p53 expression. These findings argue that MDM2 overexpression (gene amplification) represents at least one... (more)

Species: Mouse Monoclonal **Cat#:** Z2189

IHC: Human atypical lipomatous tumor stained with SMP14

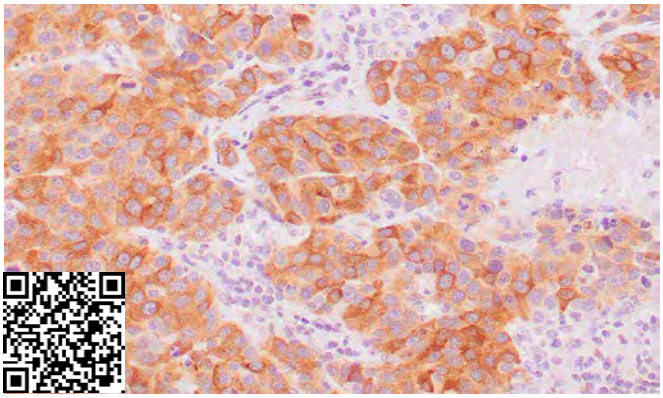


Melan-A (MART-1) (clone A103) IVD

MART-1 (Melanoma Antigen Recognized by T cells 1) or Melan-A1 is a newly identified melanocyte differentiation antigen recognized by autologous cytotoxic T lymphocytes. MART-1 is present in melanosomes and endoplasmic reticulum. Clone 103 does not cross-react with MAGE-1 or tyrosinase protein. Clone 103 labels melanomas and other tumors showing melanocytic differentiation. It does not stain tumor cells of epithelial, lymphoid, glial, or mesenchymal origin.

Species: Mouse Monoclonal **Cat:** Z2052

IHC: Human melanoma stained with A103

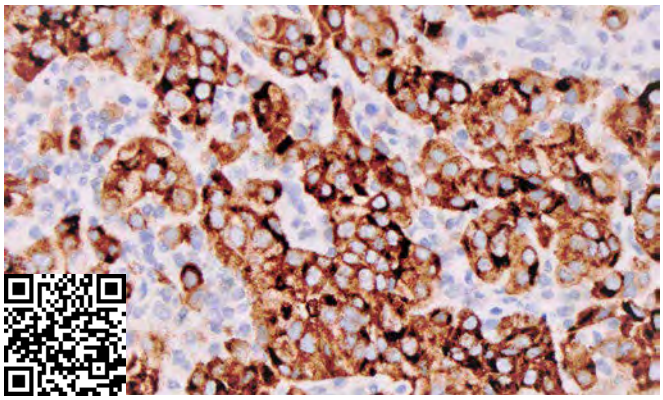


Melanosome (clone HMB-45) IVD

By immunohistochemistry, HMB-45 specifically recognizes a protein in melanocytes and melanomas. Intradermal nevi, normal adult melanocytes, and non-melanocytic cells are negative. It does not stain tumor cells of epithelial, lymphoid, glial, or mesenchymal origin.

Species: Mouse Monoclonal **Cat#:** Z2088

IHC: Human melanoma stained with HMB-45

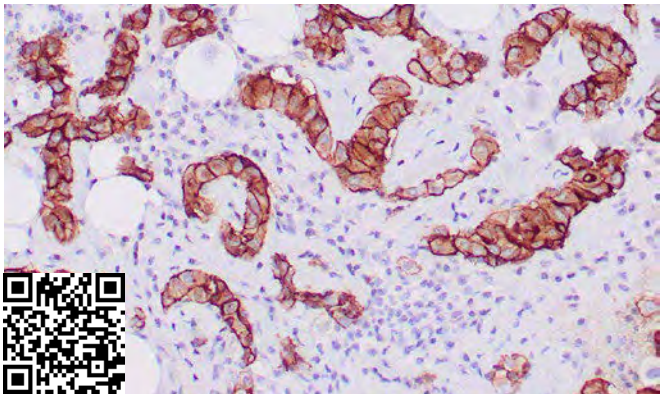


Mesothelin (clone ZM25) IVD

Mesothelin is a 40kDa glycosyl-phosphatidylinositol-anchored glycoprotein cleaved from a 69kDa precursor protein. Mesothelin immunoreactivity is high in cancers of the ovary (serous papillary, endometrioid and undifferentiated) and pancreas, with less frequent staining seen in adenocarcinomas of the endometrium, lung and stomach/esophagus. Mesothelin is one of the most sensitive markers for mesothelioma.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2353

IHC: Human mesothelioma stained with ZM25

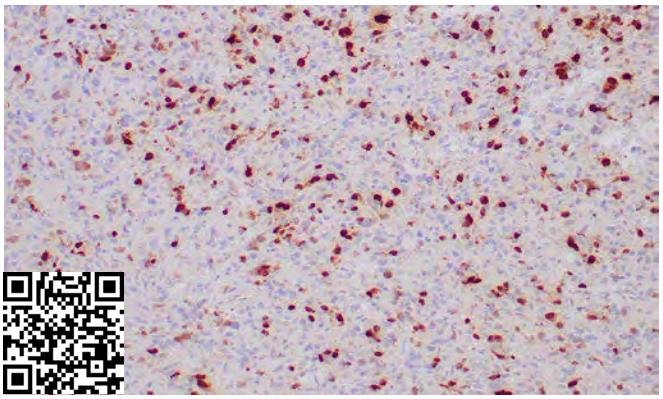


MGMT (clone ZR434) IVD; RUO(EU)

Cancer chemotherapeutic alkylating agents (e.g. BCNU,) act by inducing formation of lethal cross-links at the O6-alkylguanine position in DNA. Prior to cross-link, MGMT transfers alkyl adducts from the O6-position of guanine in DNA to a cysteine residue in its own sequence, thereby restoring DNA to its intact state. This transfer inactivates the MGMT enzyme and is irreversible; hence the levelof MGMT in a cell is directlyproportional to the level of DNA-damage it can tolerate. (more).

Species: Rabbit Monoclonal **Cat#:** Z2790

IHC: Human colon carcinoma stained with ZR434

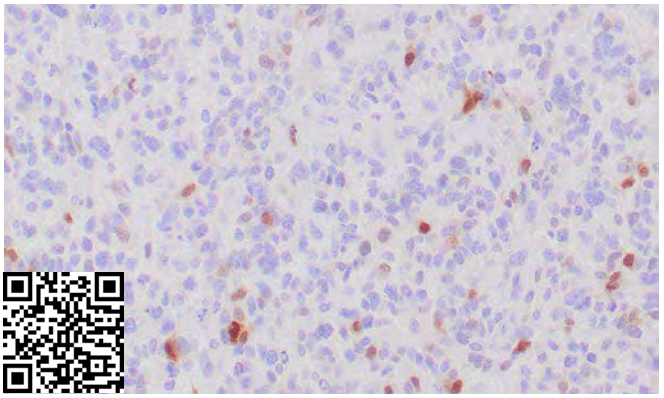


MGMT (clone ZM314)

Cancer chemotherapeutic alkylating agents (e.g. BCNU,) act by inducing the formation of lethal crosslinks at the O6-alkylguanine position in DNA. MGMT transfers alkyl adducts from the O6-position of guanine in DNA to a cysteine residue in its own sequence, thereby restoring DNA to its intact state. This transfer inactivates the MGMT enzyme and is irreversible; hence the level of MGMT in a cell is directly proportional to the level of DNA-damage toleration. In normal tissues, MGMT acts... (more)

Species: Mouse Monoclonal **Cat#:** Z2618

IHC: Human glioma stained with ZM314

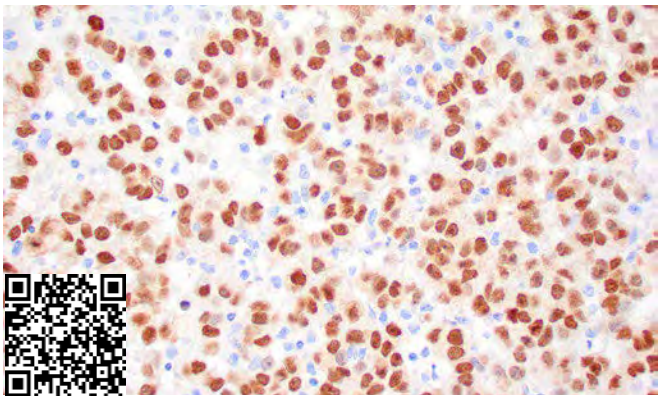


MiTF (Microphthalmia) (clone C5/D5) IVD

MiTF is a basic helix-loop-helix-leucin zipper (b-HLH-ZIP) transcription factor implicated in pigmentation, mast cells and bone development. The mutation of Mi causes Waardenburg syndrome type II in humans. In mice, a profound loss of pigmented cells in the skin eye and inner ear results, as well as osteopetrosis and defects in natural killer and mast cells. Clone D5 cocktail is especially designed for sensitive detection of Mi protein. (more)

Species: Mouse Monoclonal **Cat#:** Z2161

IHC: Human melanoma stained with C5/D5

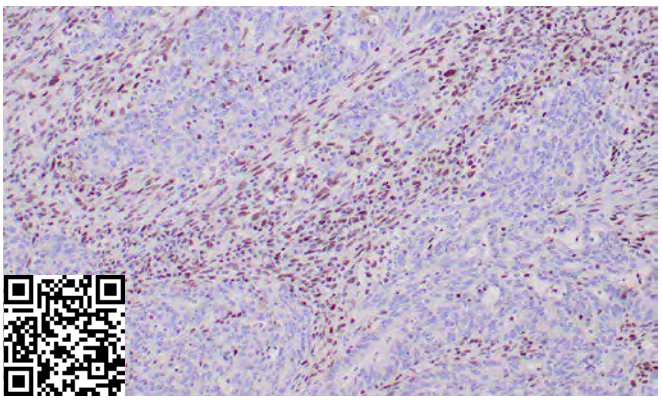


MLH1 (clone ZR347) IVD

Defects in MLH1 are the cause of hereditary non-polyposis colorectal cancer type 2 (HNPCC2). Heterodimerizes with PMS2 to form MutL alpha, a component of the post-replicative DNA mismatch repair system (MMR). DNA repair is initiated by MutS alpha (MSH2-MSH6) or MutS beta (MSH2-MSH6) binding to a dsDNA mismatch, then MutL alpha is recruited to the heteroduplex. Assembly of the... (more)

Species: Rabbit Monoclonal **Cat#:** Z2656

IHC: Human colon adenocarcinoma with Lynch syndrome stained with ZR347

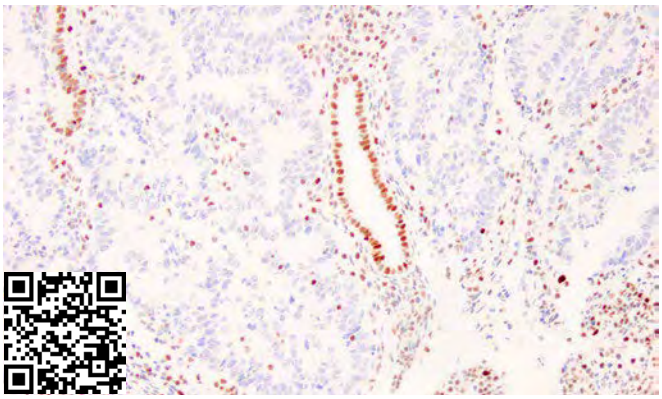


MLH-1 (clone G168-728) IVD

G168-15 recognizes MLH1. Defects in DNA repair pathways have been related to human carcinogenesis. The importance of mismatch repair genes became apparent with the identification of the genetic basis for hereditary nonpolyposis colon cancer (HNPC). MSH-2 is involved in the initial cognition of mismatch nucleotides during the replication mismatch repair process. (more)

Species: Mouse Monoclonal **Cat#:** Z2076

IHC: Human colon adenocarcinoma with Lynch syndrome stained with G168-728

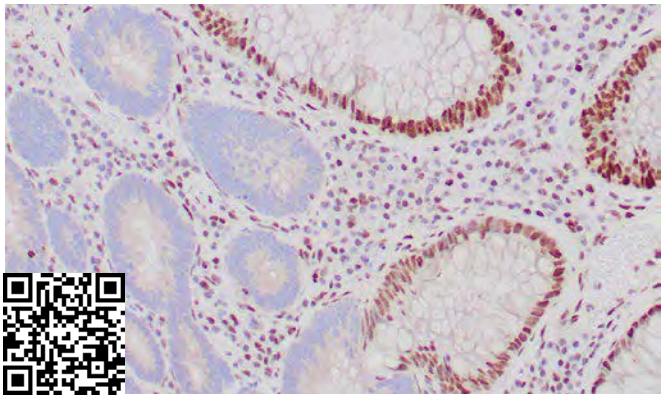


MSH2 (clone ZR260) IVD

Mutations in DNA mismatch repair genes are associated with hereditary nonpolyposis colorectal cancer (HNPCC). Initially, inherited mutations in the MSH2 and MLH1 homologs of the bacterial DNA mismatch repair genes MutS and MutL were found at high frequency in HNPCC and were shown to be associated with microsatellite instability. The demonstration that 10 to 45% of pancreatic, gastric, breast, ovarian and small cell lung cancers also display microsatellite instability has been... (more)

Species: Rabbit Monoclonal **Cat#:** Z2574

IHC: Human colon adenocarcinoma stained with ZR260

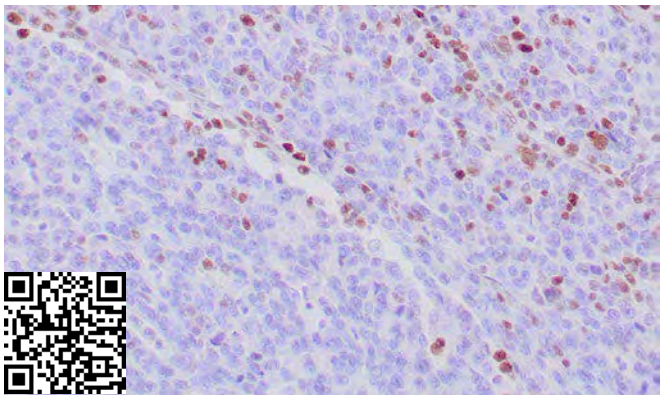


MSH6 (clone ZR342) IVD

The finding that mutations in DNA mismatch repair genes are associated with hereditary nonpolyposis colorectal cancer (HNPCC) has resulted in considerable interest in understanding the mechanism of DNA mismatch repair. Initially, inherited mutations in the MSH2 and MLH1 homologs of the bacterial DNA mismatch repair genes mutS and mutL were demonstrated at high frequency in HNPCC and were shown to be associated with microsatellite instability. A member of the mismatch repair family ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2540

IHC: Human colon carcinoma (Lynch) stained with ZR342

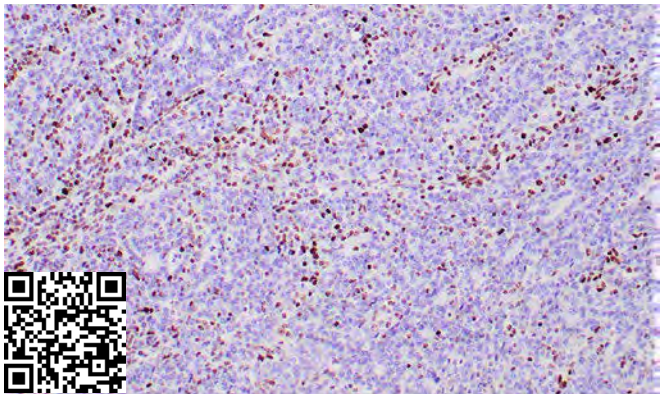


MSH-6 (clone ZM99) IVD

Mutations in DNA mismatch repair genes are associated with hereditary nonpolyposis colorectal cancer (HNPCC). Initially, inherited mutations in the MSH2 and MLH1 homologs of the bacterial DNA mismatch repair genes mutS and mutL were demonstrated at high frequency in HNPCC. A member of the mismatch repair family, GTBP (also designated MSH6), is an MSH2-related protein that binds to... (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2409

IHC: Human colon adenocarcinoma with Lynch syndrome stained with ZM99

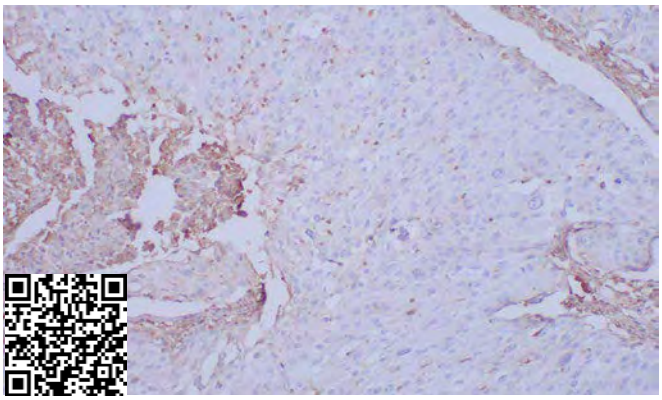


NEW MTAP (clone ZR467) IVD; RUO(EU)

MTAP is significant in cancer research because its deficiency is associated with some types of cancer. Since the MTAP gene is often co-deleted with p16INK4A/CDKN2A, concurrent immunolabeling for both proteins can identify cases with homozygous p16INK4A/CDKN2A gene deletion. Loss of MTAP labeling occurred exclusively in conjunction with loss of p16 labeling is seen in patients with mesothelioma, urothelial carcinoma, Barrett's esophagus with dysplasia, esophageal... (more)

Species: Rabbit Monoclonal **Cat:** Z2827

IHC: Human urothelial carcinoma stained with ZR467

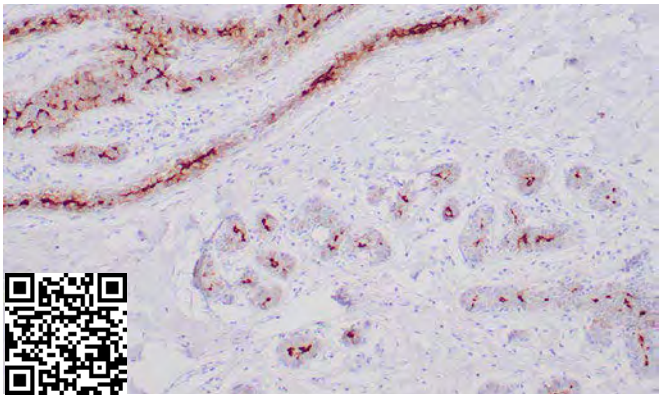


MUC-1 (clone ZR435) IVD; RUO(EU)

Reacts with MUC1. The dominant epitope of this MAb has not yet been determined. MUC1 is a large cell surface mucin glycoprotein expressed by most glandular and ductal epithelial cells and some hematopoietic cell lineages. It is expressed on the most secretory epithelium, including the mammary gland and some hematopoietic cells. It is expressed abundantly in lactating mammary glands and over-expressed abundantly in >90% of breast carcinomas and metastases. Transgenic MUC1 has ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2791

IHC: Human cholangiocarcinoma stained with ZR435

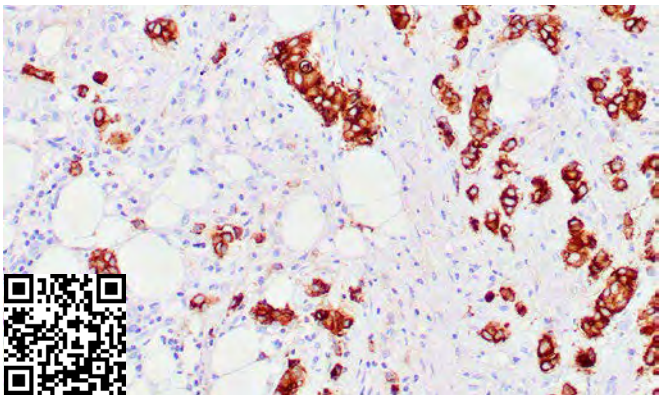


MUC-1 (clone ZM32) IVD

MUC1 is expressed abundantly in lactating mammary glands and over expressed abundantly in >90% breast carcinomas and metastases. Transgenic MUC1 has been shown to associate with all four c-erbB receptors and localize with c-erbB1 (EGFR) in lactating glands. Antibody to EMA is useful as a pan-epithelial marker for detecting early metastatic loci of carcinoma in bone marrow or liver. (more)

Species: Mouse Monoclonal **Cat#:** Z2336

IHC: Human cholangiocarcinoma stained with ZM32

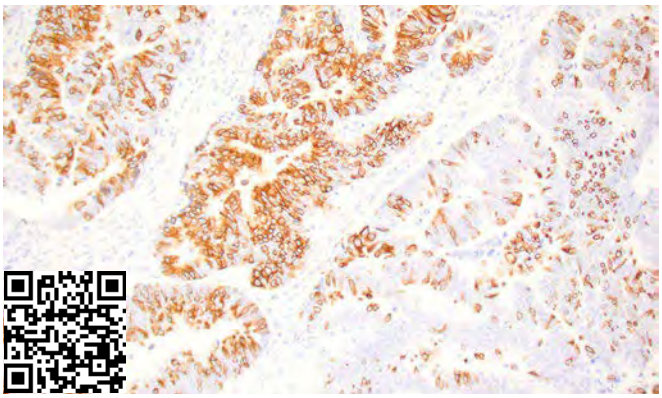


MUC-2 (clone Ccp58) IVD

Secreted epithelial mucins are large macromolecules which exhibit extreme polydispersity. Mucin 2 is the major intestinal mucin. O-glycans are attached to MUC2 in a potentially diverse arrangement, which is crucial for their interaction with endogenous and exogeneous lectins.

Species: Mouse Monoclonal **Cat#:** Z2151

IHC: Human colon adenocarcinoma stained with Ccp58

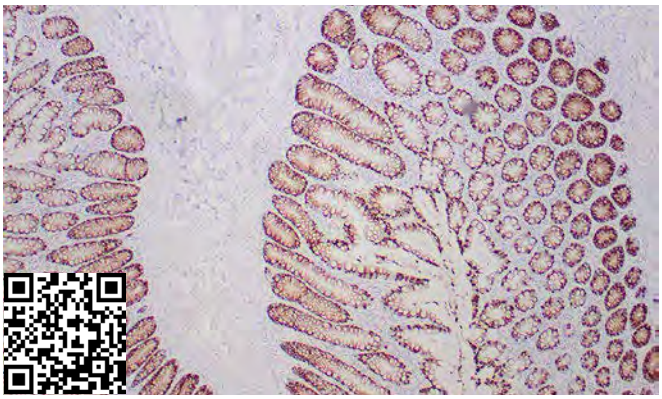


MUC-2 (clone ZR175) IVD

Secreted epithelial mucins are large macromolecules that exhibit extreme polydispersity. Mucin 2 is the major intestinal mucin. O-glycans are attached to MUC2 in a potentially diverse arrangement, which is crucial for interacting with endogenous and exogenous lectins.

Species: Rabbit Monoclonal **Cat#:** Z2702

IHC: Human normal colon stained with ZR175

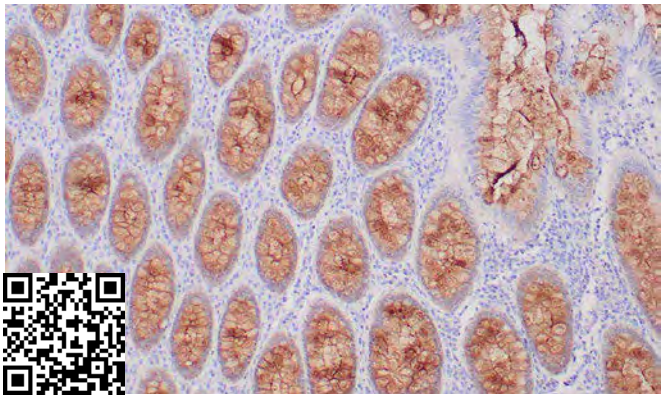


MUC-4 (clone ZR201) IVD

MUC-4 transcripts have been detected in normal respiratory epithelium and lung. MUC-4 is a specific (100%) and sensitive (90%) marker of lung adenocarcinomas and is negative for mesotheliomas. Reportedly, MUC-4 expression in invasive ductal carcinoma of the pancreas is an independent factor for poor prognosis. MUC-4 is also explicitly expressed in low-grade fibromyxoid sarcoma and sclerosing fibrosarcoma. (more)

Species: Rabbit Monoclonal **Cat#:** Z2520

IHC: Human sclerosing fibrosarcoma stained with ZR201

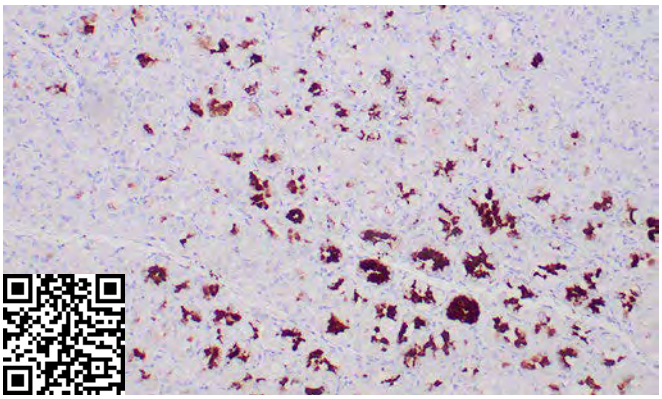


MUC-5AC (clone ZR19) IVD

Gastric mucin M1 antigens are detected/found in columnar mucus cells of surface gastric epithelium and in goblet cells of the fetal and precancerous colon but not in those of normal colon. Evidence from the literature suggests that they are associated with the peptide core of mucins. Resurgence of gastric mucin reactivity during colonic carcinogenesis is suggested to be due to either re-expression of the peptide core of gastric (or fetal colonic) mucins in the adult colon or due to changes in... (more)

Species: Rabbit Monoclonal **Cat#:** Z2703

IHC: Human stomach stained with ZR19

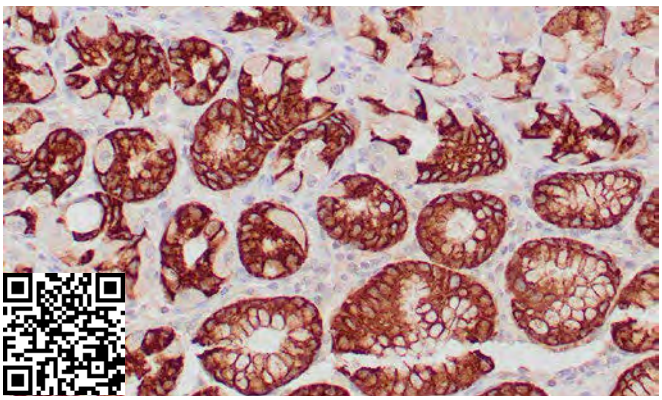


MUC-5AC (clone ZM148) IVD

Recognizes the peptide core of gastric mucin M1 (recently identified as Mucin 5AC). Its epitope is located in the C-terminal cysteine rich part of the peptide core of MUC5AC. This mucin is present in primary ovarian mucinous cancer but usually absent in colorectal adenocarcinoma, thus showing an expression pattern opposite to MUC2. Together with a panel of antibodies, Anti-MUC5AC may be useful for differential identification of primary mucinous ovarian tumors from colon.... (more)

Species: Mouse Monoclonal **Cat#:** Z2461

IHC: Human gastric mucosa stained with ZM148

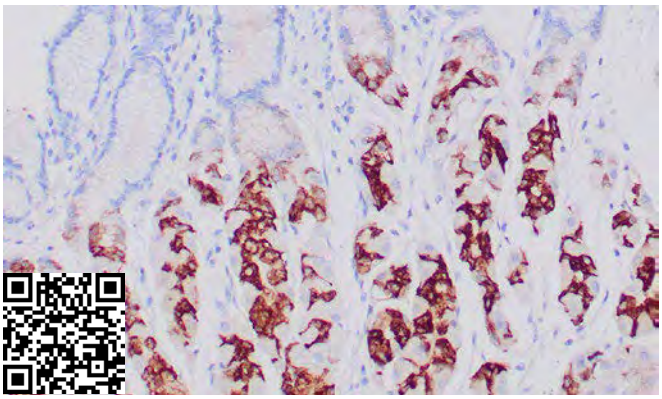


MUC-6 (clone ZR437) IVD; RUO(EU)

The MUC6 gastric mucin is a secreted glycoprotein that plays an essential role in epithelial cyto-protection from acid, proteases, pathogenic microorganisms, and mechanical trauma in the gastrointestinal tract. Mucin 6 expression is highest in the stomach and gall bladder, with lower expression in the terminal ileum and right colon. In gastric cancer, Mucin 6 has an altered expression. In normal stomach, Mucin 6 is associated with Lewis type 2; Mucin 6 is also expressed in gastric metaplasia, duodenum and ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2793

IHC: Human gastric mucosa stained with ZR437

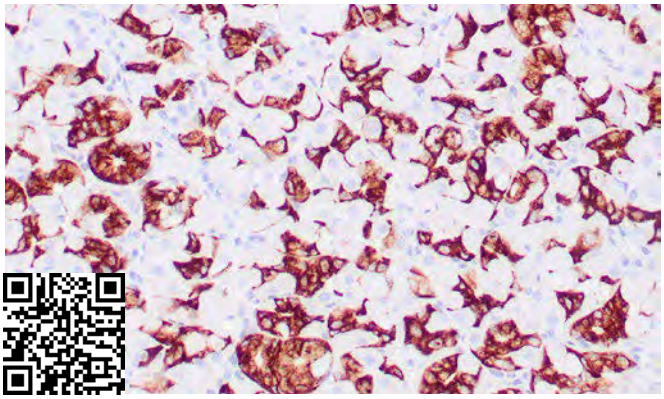


MUC-6 (clone ZM89) IVD

Mucin 6 expression is highest in the stomach and gall bladder, with lower expression in the terminal ileum and right colon. In gastric cancer, Mucin 6 has an altered expression. In normal stomach, Mucin 6 is associated with Lewis type 2; Mucin 6 is also expressed in gastric metaplasia, duodenum and pancreas. Mucin 6 is a secretory mucin, located in the deeper mucosal folds of human gall bladder, and its expression is altered with increasing degrees of inflammation. (more)

Species: Mouse Monoclonal **Cat:** Z2399

IHC: Human gastric mucosa stained with ZM89

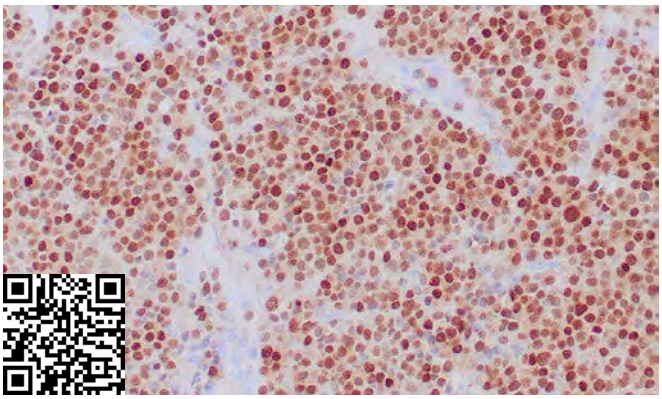


MUM1 (clone ZR411) IVD; RUO(EU)

MUM1 is a nuclear transcription factor necessary for developing and activating B lymphocytes. Involved in the regulation of cell growth, transformation, induction of apoptosis, and development of T-cell immune response. MUM1 is useful in a panel with other markers for subclassifying malignant lymphomas and identifying plasma cell differentiation. Particularly, MUM1 may be helpful in the identification of plasma cell differentiation when morphologic evidence is lacking, and Ig light chains are difficult ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2767

IHC: Human IgA myeloma stained with ZR411

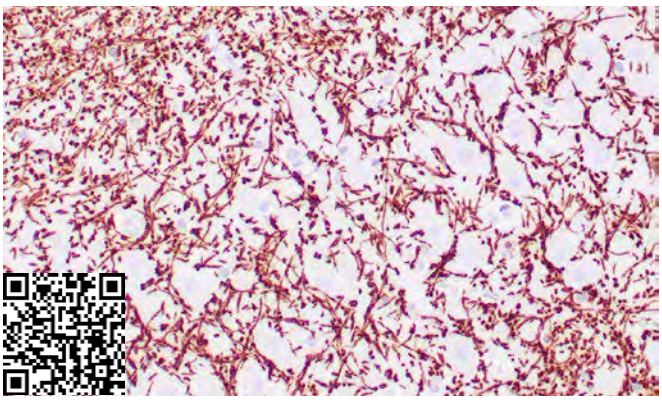


MBP (clone ZR109) IVD

Myelin basic protein (MBP) can interact with a number of polyanionic proteins including actin, tubulin, calmodulin, and clathrin, and negatively charged lipids, and acquires structure on binding to them. It may act as a membrane actin-binding protein, which might allow it to participate in transmission of extracellular signals to the cytoskeleton in oligodendrocytes and tight junctions in myelin. MBP may be applicable as a marker for oligodendrogliomas. (more)

Species: Monospecific Rabbit Monoclonal **Cat#:** Z2411

IHC: Human brain white matter stained with ZR109

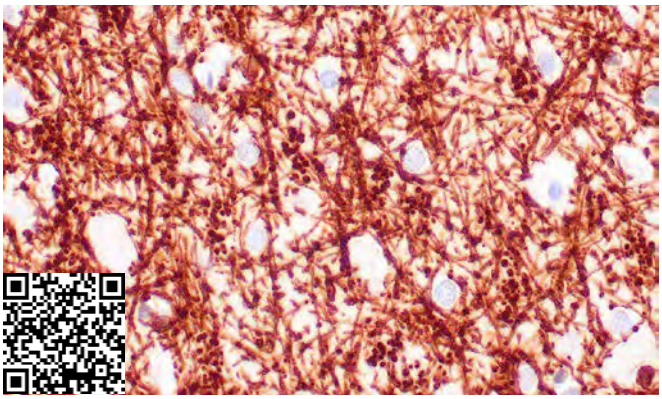


MBP (clone ZM202) IVD

Myelin basic protein (MBP) can interact with a number of polyanionic proteins including actin, tubulin, calmodulin, and clathrin, and negatively charged lipids, and acquires structure on binding to them. It may act as a membrane actin-binding protein, which might allow it to participate in transmission of extracellular signals to the cytoskeleton in oligodendrocytes and tight junctions in myelin. MBP may be applicable as a marker for oligodendrogliomas. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2485

IHC: Human brain white matter stained with ZM202

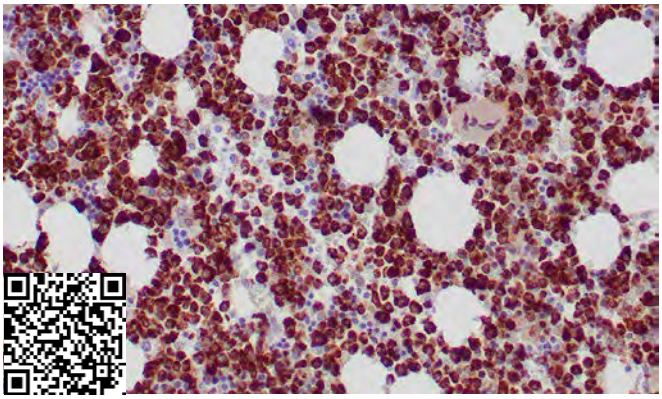


Myeloperoxidase (clone ZM352) IVD

The heme protein myeloperoxidase (MPO) is a major component of azurophilic granules of neutrophils and polymorphonuclear leukocytes. Optimal oxygen-dependent microbiocidal activity depends on MPO as the critical enzyme for the generation of hypochlorous acid and other toxic oxygen products. The MPO precursor is synthesized during the promyelocytic stage of myeloid differentiation and is subsequently... (more)

Species: Mouse Monoclonal **Cat:** Z2680

IHC: Human bone marrow stained with ZM352

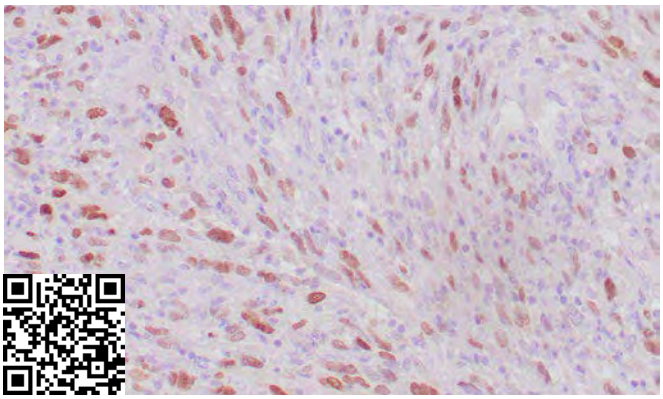


MyoD1 (clone ZR262) IVD

Anti-MyoD1 immunostaining identifies cells committed to myogenesis in their earliest phase, thus, it is a better biomarker for less differentiated Rhabdomyosarcomas (RMS). RMS are the most frequent malignant soft tissue neoplasms of childhood. While better differentiated RMS have cross-striations or rhabdomyoblasts that allow for a confident morphologic diagnosis, less differentiated RMS resemble other small blue round-cell tumors. Studies suggest, anti-MyoD1 may be used... (more)

Species: Rabbit Monoclonal **Cat#:** Z2576

IHC: Human rhabdomyosarcoma stained with ZR262

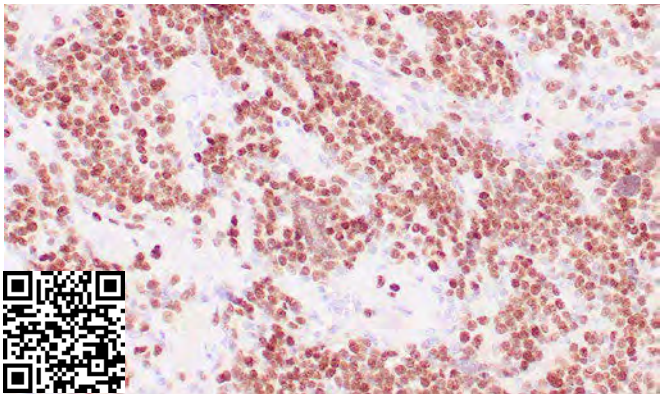


Myogenin (clone F5D) IVD

Transfection of myogenin into multipotential mesodermal cells have been shown to convert the mesodermal cells to myoblasts. Expression of myogenin is restricted to cells of skeletal muscle origin. It is therefore a useful marker for tumors of the muscle lineage, being strongly expressed in alveolar rhabdomyosarcomas. (more)

Species: Mouse Monoclonal **Cat#:** Z2054

IHC: Human rhabdomyosarcoma stained with F5D



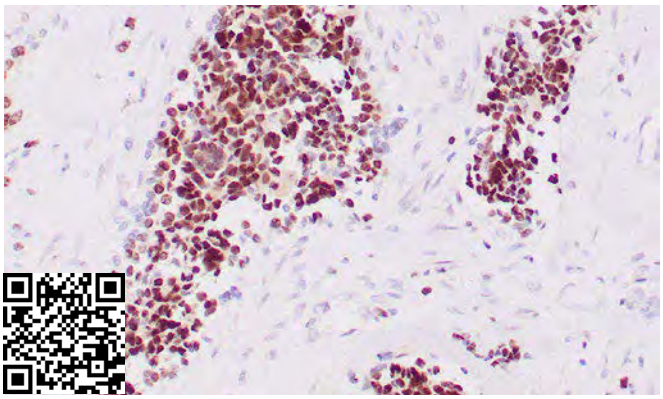
Myogenin (clone ZM149)

IVD

MyoD family members are expressed exclusively in skeletal muscle and play a key role in activating myogenesis by binding to enhancer sequences of muscle-specific genes. Anti-myogenin labels the nuclei of myoblasts in developing muscle tissue and is expressed in tumor cell nuclei of rhabdomyosarcoma and some leiomyosarcomas. Positive nuclear staining may occur in Wilms' tumor.

Species: Mouse Monoclonal **Cat#:** Z2462

IHC: Human rhabdomyosarcoma stained with ZM149



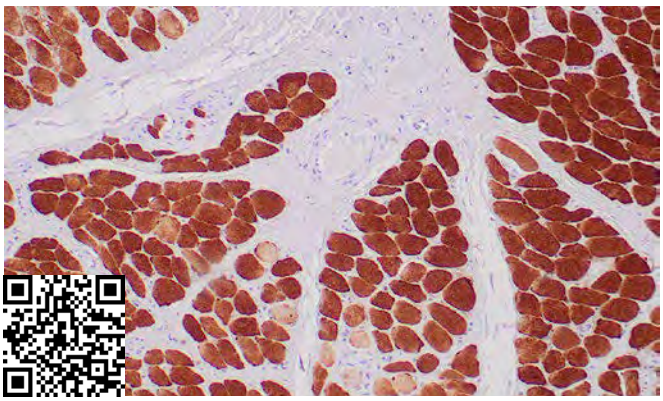
Myoglobin (clone ZR69)

IVD

In combination with other striated muscle markers such as vimentin and myogenin, myoglobin is helpful in the identification of rhabdomyosarcoma and tumors with skeletal muscle differentiation. Reportedly, myoglobin is expressed on epithelial cancer cells due to changed metabolic and environmental conditions. (more)

Species: Rabbit Monoclonal **Cat:** Z2379

IHC: Human skeletal muscle stained with ZR69



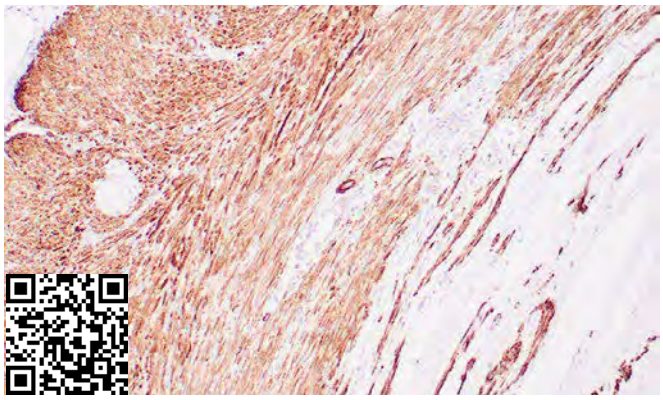
Myosin, SMHC (clone SMMS-1)

IVD

SMMS-1 is an antibody to smooth muscle myosin, heavy chain that reacts with human visceral and vascular smooth muscle cells. The antibody also reacts with human myoepithelial cells. It is very helpful in distinguishing between benign sclerosing breast lesions and infiltrating carcinomas in difficult cases since it strongly stains the myoepithelial layer in the benign lesions while it is negative in the infiltrating carcinomas.

Species: Mouse Monoclonal **Cat#:** Z2229

IHC: Human colon wall stained with SMMS-1



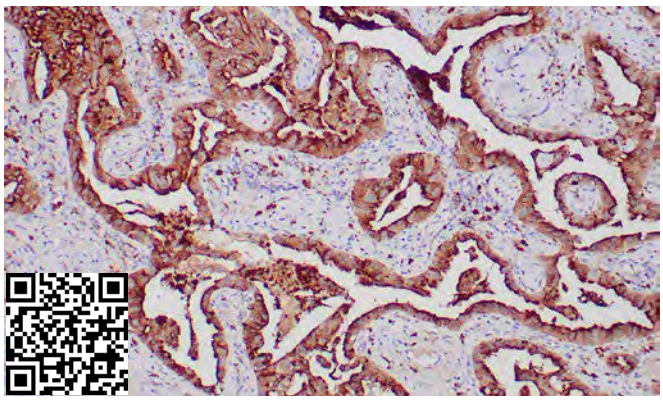
Napsin A (clone ZR206)

IVD

Napsin is a pepsin-like aspartic proteinase connected with the maturation of surfactant protein B. IHC studies revealed high expression levels of napsin A in human lung and kidney but low expression in the spleen. Napsin A has expressed in type II pneumocytes and adenocarcinomas of the lung. The high specificity expression of napsin A in adenocarcinomas of the lung is helpful to distinguish primary lung adenocarcinomas from adenocarcinomas of other organs. (more)

Species: Rabbit Monoclonal **Cat#:** Z2705

IHC: Human lung adenocarcinoma stained with ZR206

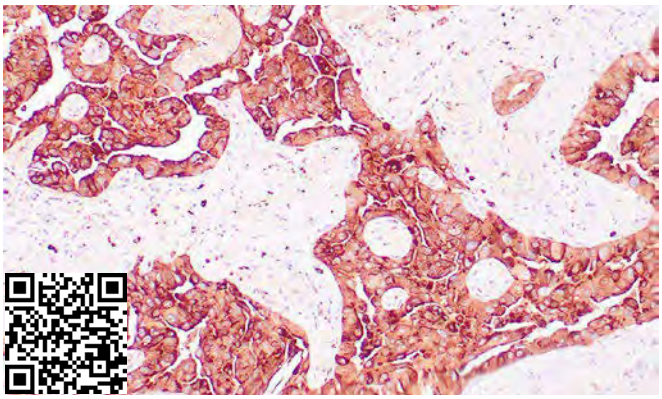


Napsin-A (clone ZM11) IVD

Napsin is a pepsin-like aspartic proteinase, in the A1 clan of the AA clade of proteinases. IHC studies revealed high expression levels of napsin A in human lung and kidney but low expression in spleen. Napsin A is expressed in type II pneumocytes and in adenocarcinomas of lung. The high specificity expression of napsin A in adenocarcinomas of lung is useful to distinguish primary lung adenocarcinomas from adenocarcinomas of other organs. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2294

IHC: Human lung adenocarcinoma stained with ZM11

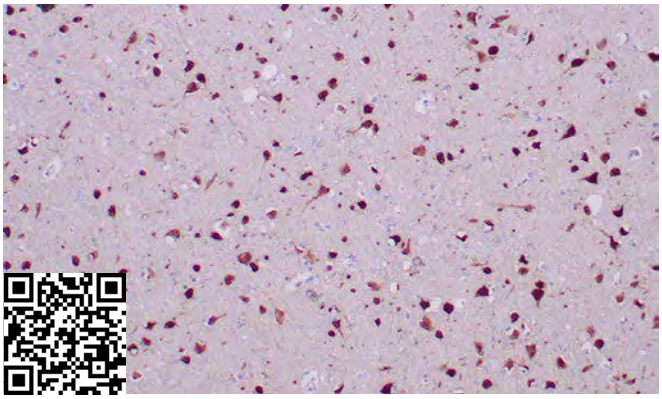


NeuN (clone ZR386) IVD

NeuN antibody specifically recognizes the DNA-binding, neuron-specific protein NeuN. NeuN protein distributions are apparently restricted to neuronal nuclei and some proximal neuronal processes in both fetal and adult brain although, some neurons fail to be recognized by NeuN at all ages: INL retinal cells, Cajal-Retzius cells, Purkinje cells, inferior olivary and dentate nucleus neurons, and sympathetic ganglion cells are examples. Immunohistochemically detectable ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2677

IHC: Human cerebrum stained with ZR386

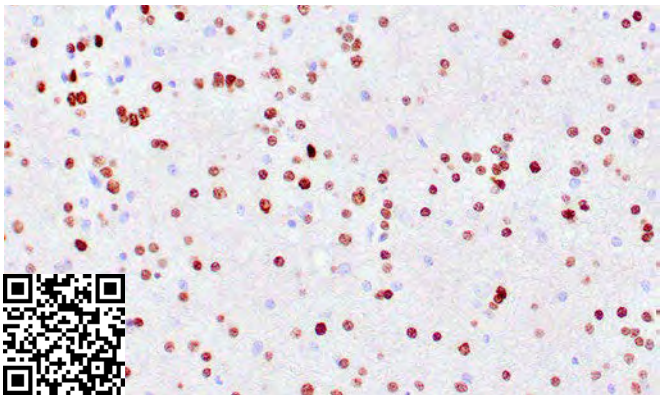


NeuN (clone A60) IVD

NeuN antibody specifically recognizes the DNA-binding, neuron-specific protein NeuN, which is present in most CNS and PNS neuronal cell types of all vertebrates tested. Immunohistochemically detectable NeuN protein first appears at developmental timepoints that correspond with the withdrawal of the neuron from the cell cycle and/or with the initiation of terminal differentiation of the neuro. Strong nuclear staining suggests a nuclear regulatory protein function; however, no evidence... (more)

Species: Mouse Monoclonal **Cat:** Z2178

IHC: Human cerebellum stained with A60

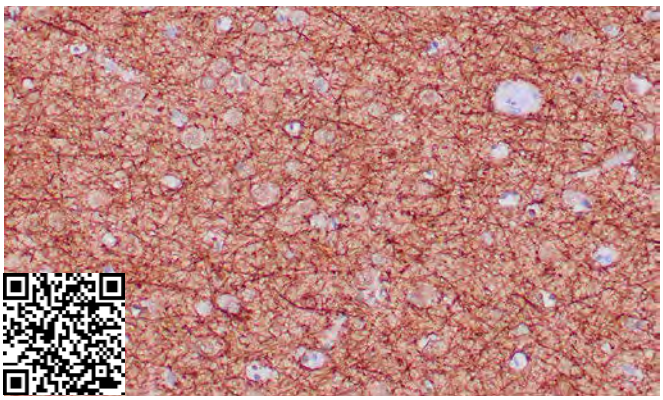


Neurofilament (clone ZR216) IVD

This MAb stains a number of neural, neuroendocrine, and endocrine tumors. Neuromas, ganglioneuromas, gangliogliomas, ganglioneuroblastomas, and neuroblastomas stain positively for anti-neurofilament. Neurofilaments are also present in paragangliomas as well as adrenal and extra-adrenal pheochromocytomas. Carcinoids, neuroendocrine carcinomas of the skin, and oat cell carcinomas of the lung also express neurofilament. (more)

Species: Rabbit Monoclonal **Cat#:** Z2706

IHC: Human cerebellum stained with ZR216

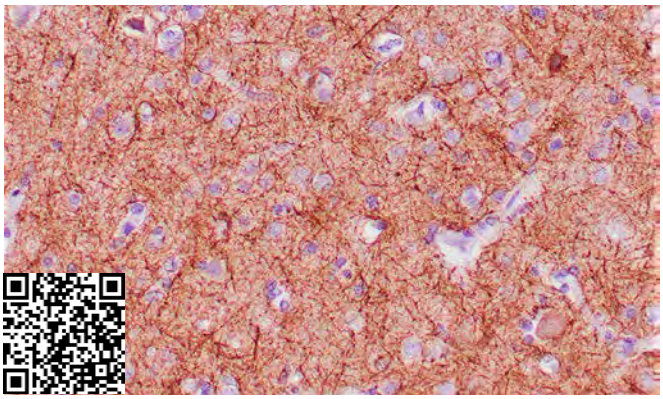


Neurofilament (clone 2F11) IVD

Anti-neurofilament stains a number of neural, neuroendocrine, and endocrine tumors. Neuromas, ganglioneuromas, gangliogliomas, ganglioneuroblastomas, and neuroblastomas stain positively for anti-neurofilament. Neurofilaments are also present in paragangliomas as well as adrenal and extra-adrenal pheochromocytomas. Carcinoids, neuroendocrine carcinomas of the skin, and oat cell carcinomas of the lung also express neurofilament. (more)

Species: Mouse Monoclonal **Cat#:** Z2091

IHC: Human cerebellum stained with 2F11

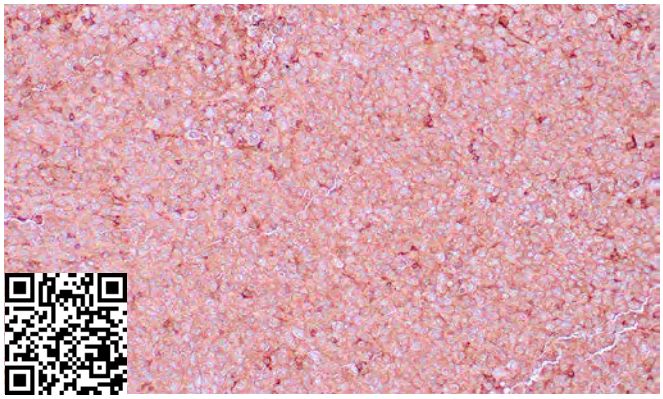


NGFR (clone ZM55) IVD

NGFR is a reliable marker for desmoplastic and neurotropic melanoma.Expression of NGFR is ubiquitous and not limited to the nervous system, being expressed in mature nonneural cells such as perivascular cells, follicular dendritic cells, basal epithelium of oral mucosa and hair follicles, prostate basal cells and myoepithelial cells. Studies in prostate and urothelial cancer suggest that NGFR may act as a tumor suppressor of... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2365

IHC: Human malignant melanoma stained with ZM55

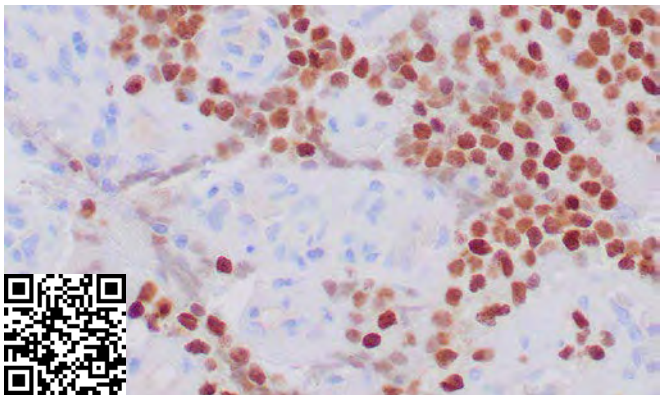


NKX2.2 (clone ZR438) IVD; RUO(EU)

Expression of NKX2.2 has been found in neuroendocrine tumors of the gut, making it a potential marker for the study of gastrointestinal neuroendocrine tumors. More recently, NKX2.2 protein was identified as a target of EWS-FLI-1, the fusion protein specific to Ewing sarcoma, and was shown to be differentially upregulated in Ewing sarcoma on the basis of array-based gene expression analysis. It acts as a valuable marker for Ewing sarcoma, with a sensitivity of 93% and a specificity of 89%, and aids in the differential diagnosis of small round cell tumors. (more).

Species: Rabbit Monoclonal **Cat#:** Z2794

IHC: Human Ewing sarcoma stained with ZR438

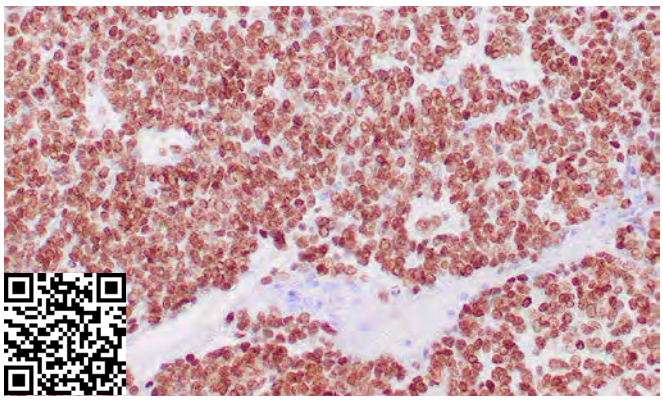


NKX2.2 (clone ZM14) IVD

Expression of NKX2.2 has been found in neuroendocrine tumors of the gut, making it a potential marker for the study of gastrointestinal neuroendocrine tumors. More recently, NKX2.2 protein was identified as a target of EWS-FLI-1, the fusion protein specific to Ewing sarcoma, and was shown to be differentially upregulated in Ewing sarcoma on the basis of array-based gene expression analysis. It acts as a valuable marker for Ewing sarcoma, and aids in the differential diagnosis of small round cell tumors.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2348

IHC: Human Ewing's sarcoma stained with ZM14

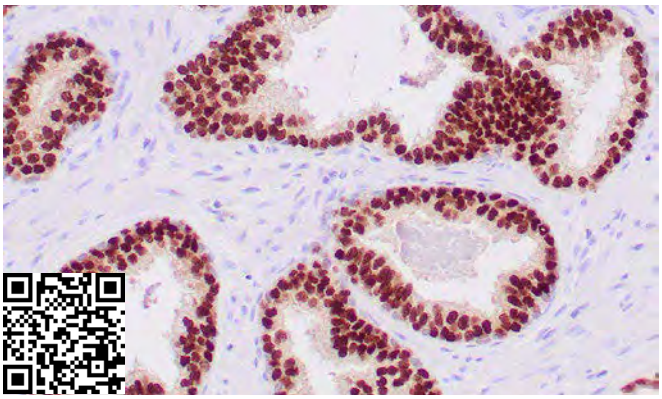


NKX3.1 (clone ZM95) IVD

NKX3.1 is a prostate specific gene encoding a transcription factor with an important role in prostate development and carcinogenesis. NKX3.1 expression is highly restricted in prostate epithelial cells and therefore can be used as a diagnostic biomarker for prostate cancer and other metastatic lesions of prostatic origin. Furthermore, NKX3.1 shows better sensitivity than Prostate Specific Antigen (PSA) for identifying metastatic prostatic adenocarcinoma, suggesting ... (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2395

IHC: Human prostate stained with ZM95

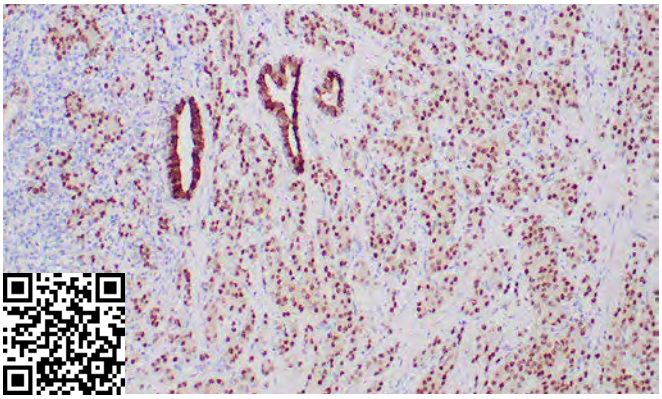


NKX3.1 (clone ZR222) IVD

NKX3.1 is a prostate specific gene encoding a transcription factor with an important role in prostate development and carcinogenesis. NKX3.1 expression is highly restricted in prostate epithelial cells and therefore can be used as a diagnostic biomarker for prostate cancer and other metastatic lesions of prostatic origin. Furthermore, NKX3.1 shows better sensitivity than Prostate Specific Antigen (PSA) for identifying metastatic prostatic adenocarcinoma, suggesting ... (more)

Species: Monospecific Mouse Monoclonal **Cat:** Z2707

IHC: Human prostate adenocarcinoma stained with ZR222

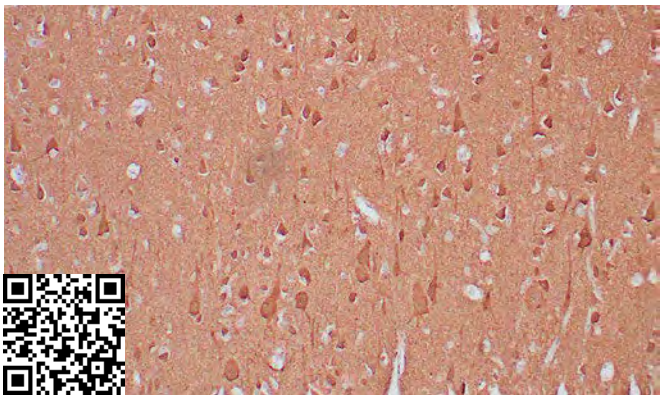


NSE (clone ZR406) IVD; RUO(EU)

Recognizes a protein of about 50kDa, which is identified as gamma-enolase. Three isoenzymes of enolases are identified, alpha, beta and gamma. Alpha-isoform is expressed in most tissues, whereas beta-form is expressed predominantly in muscle tissue whereas gamma-enolase is found only in nervous tissue. These isoforms exist as both homodimers and heterodimers, and they play a role in converting phosphoglyceric acid to phosphenolpyruvic acid in the glycolytic pathway. NSE-gamma is a useful ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2762

IHC: Human cerebellum stained with ZR406

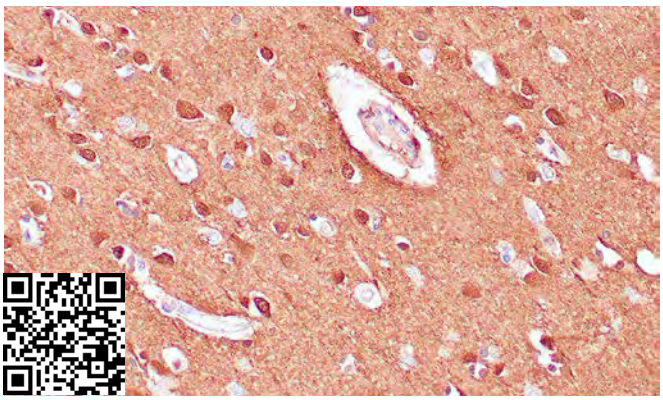


NSE (clone ZM24) IVD

Recognizes gamma-enolase. Three isoenzymes of enolases are identified, alpha, beta and gamma. Alpha-isoform is expressed in most tissues, whereas beta-form is expressed predominantly in muscle tissue whereas gamma-enolase is found only in nervous tissue. NSE-gamma is a useful marker to identify peripheral nerves and tumors of neuro-endocrine origins, such as pheochromocytomas. It be usually employed in combination with other markers such as synaptophysin, Chromogranin A, and Neurofilament. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2351

IHC: Human cerebellum stained with

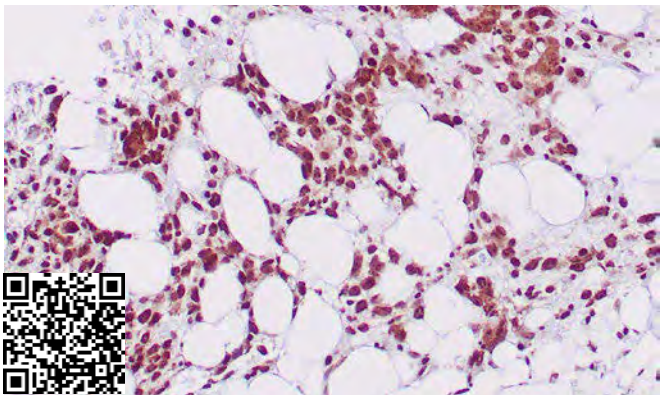


Nucleophosmin (NPM1; clone ZM82) IVD

Recognizes a 33kDa glycoprotein, identified as nucleophosmin (NPM). It is thought to be involved in several processes including regulation of the ARF/p53 pathway. A number of genes are fusion partners, in particular the anaplastic lymphoma kinase gene on chromosome 2. Mutations in this gene are associated with acute myeloid leukemia. The antibody is a useful aid for classification of acute myeloid leukemia. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2405

IHC: Human bone marrow stained with ZM82

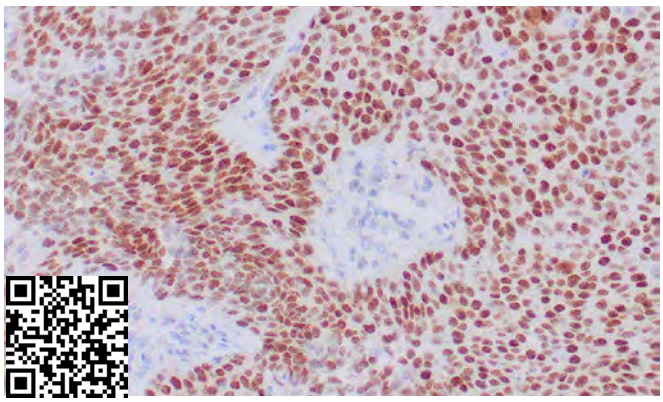


NEW NUT (clone ZR453) IVD; RUO(EU)

The NUT antibody detects a protein called NUT (Nuclear Protein in Testis), which is involved in a variety of cellular processes. Abnormal expression has been associated with certain cancers, specifically NUT carcinoma, a rare and aggressive type of cancer that primarily affects the thoracic and head and neck regions. It is characterized by the presence of a NUT fusion gene, typically resulting from a chromosomal translocation. NUT antibody staining is nuclear with > 90% of cells positive, and... (more)

Species: Rabbit Monoclonal **Cat#:** Z2810

IHC: Human NUT carcinoma stained with ZR453

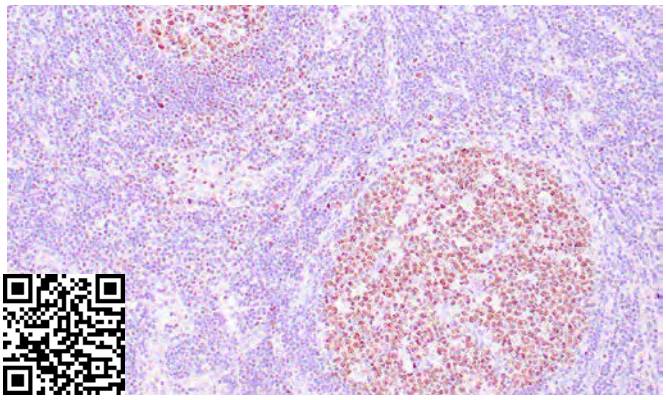


OCT-2 (clone ZM90) IVD

Oct-2 expression can be used as a marker of B-cell lineage and differentiation. Mantle cell lymphoma, follicular lymphoma, marginal zone lymphoma, plasmacytoma, Burkitt lymphoma, diffuse large cell lymphoma, diffuse large B-cell lymphoma, Hodgkin lymphoma display increased expression of Oct-2. Several studies of Oct-2 expression have shown a low level expression in pre-B, T-cell, myelomonocytic, and epithelial cell lines,... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2400

IHC: Human lymph node stained with ZM90

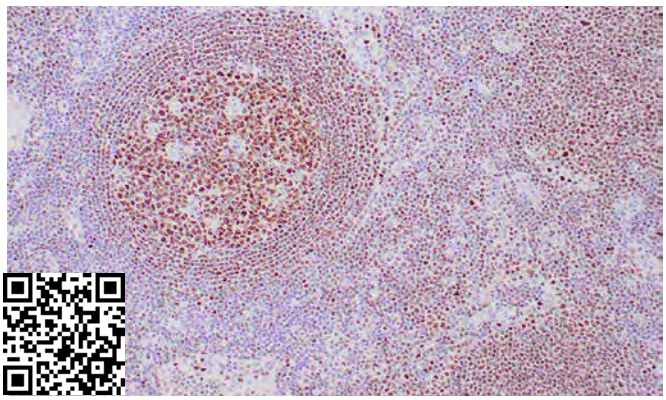


OCT-2 (clone ZR227) IVD

Oct-2 expression can be used as a B-cell lineage and differentiation marker. Germinal center B-cells, mantle B-cells, monocytoid B-cells, and plasma cells show high-level expression of Oct-2. Additionally, mantle cell lymphoma, follicular lymphoma, marginal zone lymphoma, plasmacytoma, Burkitt lymphoma, diffuse large cell lymphoma, diffuse large B-cell lymphoma, Hodgkin lymphoma display increased expression of Oct-2. (more)

Species: Rabbit Monoclonal **Cat#:** Z2708

IHC: Human lymph node stained with ZR227

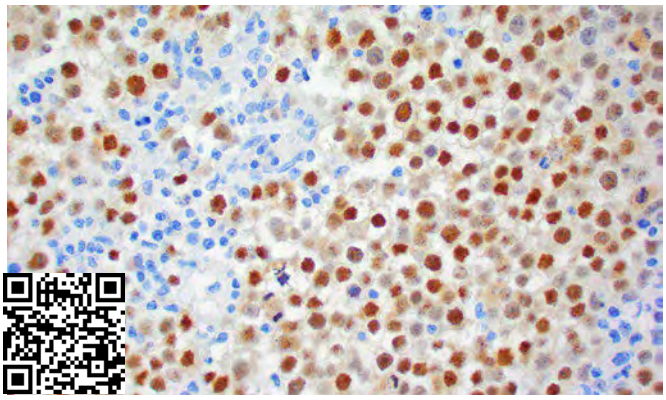


OCT-4 (clone C-10) IVD

Oct-4 is essential for the identity of the pluripotential founder cell population in the mammalian embryo. A critical amount of Oct-4 is required to sustain stem-cell self-renewal, and up or down regulation induce divergent developmental programs. Two isoforms of Oct-3, termed Oct-3A and Oct-3B, are generated by alternative splicing. Oct-4 (C-10) is recommended for detection of Oct-3A (Oct-4) and Oct-3B of mouse, rat and human origin by immunofluorescence, and paraffin immunohistochemistry. (more)

Species: Mouse Monoclonal **Cat#:** Z2104

IHC: Human seminoma stained with C-10

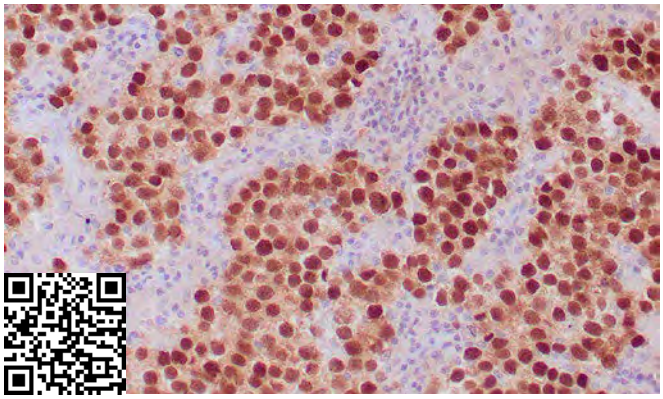


OCT-4 (clone ZR364) IVD

OCT4 is involved in regulating pluripotency during normal development, and is detectable in embryonic stem and germ cells. OCT4 is a crucial regulator of self-renewal in embryonic stem cells; its expression is potentially correlated with tumorigenesis and can affect tumor recurrence or resistance to therapies. OCT4 is expressed in undifferentiated pluripotent cells, germ cells in the ovary, and testes. OCT4 Ab is useful in the identification of primary as well as metastatic germ cell tumors. (more)

Species: Rabbit Monoclonal **Cat#:** Z2604

IHC: Human seminoma stained with ZR364

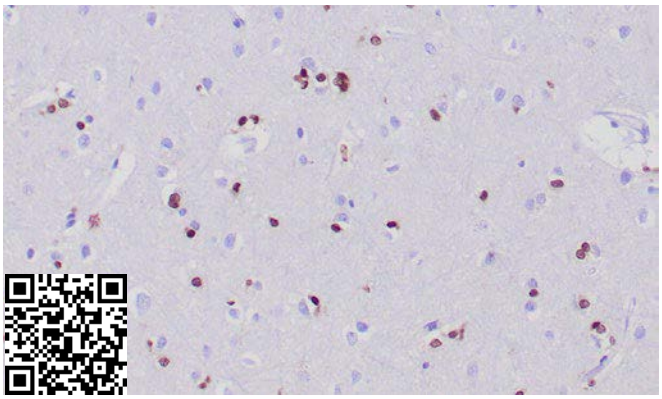


Olig2 (clone ZR340) IVD

Olig2 expression has been reported in most glial tumors, such as oligodendrogliomas and astrocytomas. Although no Olig2 expression has been found in the non-glial tumors including neuroepithelial tumors, ependymomas, sub ependymomas, medulloblastomas, and nonneuroepithelial tumors, such as CNS lymphomas, meningiomas and others. Compared to the strong staining seen in glioma samples, a weak expression is observed in non-tumoral brain tissue (gliosis). (more)

Species: Rabbit Monoclonal **Cat#:** Z2646

IHC: Human cerebrum stained with ZR340

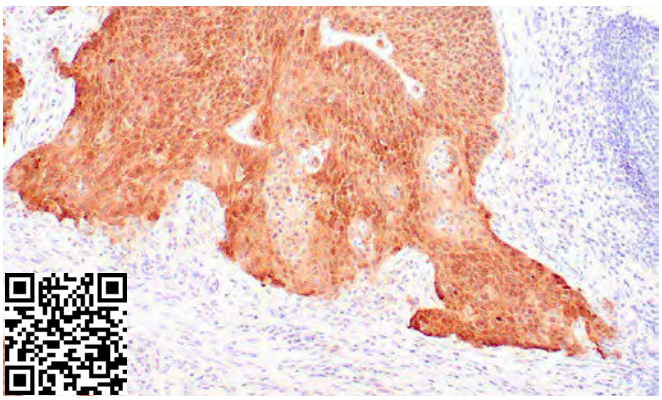


$p16^{INK4a}$ (clone G175-405) IVD

$p16^{INK4a}$ is a tumor suppressor protein. Recent analyses of the $p16I^{INK4a}$ gene revealed several mutations in several human cancers. Although the frequency of p16INK4a abnormalities is higher in tumor-derived cell lines than in unselected primary tumors, significant subsets of clinical cases with aberrant $p16^{INK4a}$ gene have been reported among melanomas, gliomas, esophageal, pancreatic lung, and urinary bladder carcinomas and some leukemias. (more)

Species: Mouse Monoclonal **Cat#:** Z2117

IHC: High grade cervical intraepithelial neoplasia (CINIII) stained with G175-40



p16^{INK4a} (clone JC2) IVD

p16^{INK4a} is a tumor suppressor protein. Recent analyses of the p16I^{NK4a} gene revealed homozygous deletions, nonsense, missense, or frameshift mutations in several human cancers. Although the frequency of p16INK4a abnormalities is higher in tumor-derived cell lines than in unselected primary tumors, significant subsets of clinical cases with aberrant p16^{INK4a} gene have been reported among melanomas, gliomas, esophageal, pancreatic lung, and urinary... (more)

Species: Mouse Monoclonal **Cat#:** Z2567

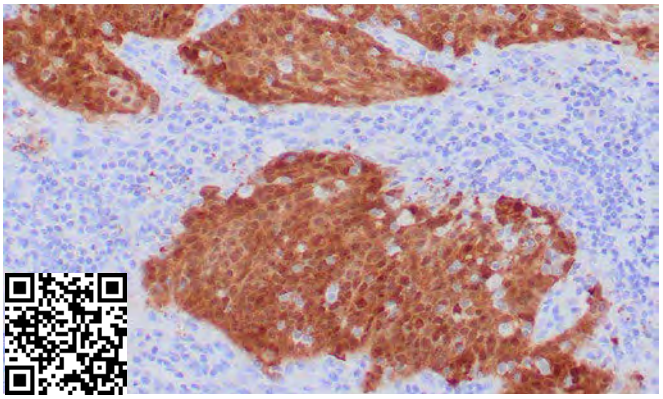
IHC: Cervical invasive squamous cell carcinoma stained with JC2

p16^{INK4a} (clone ZR407) IVD; RUO(EU)

p16INK4a is a specific inhibitor of cdk4/cdk6, and a tumor suppressor. Gene analysis reveals homozygous deletions, nonsense, missense, or frameshift mutations in several human cancers. Aberrant p16INK4a gene have been reported among melanomas, gliomas, esophageal, pancreatic, lung, and urinary bladder carcinomas, and some types of leukemia. Expression of p16INK4a (p16 positive) is highly correlated with human papilloma virus (HPV) infection in head and neck squamous cell carcinomas (HNSCC). (more)

Species: Rabbit Monoclonal **Cat#:** Z2763

IHC: Invasive NSCC stained with ZR407

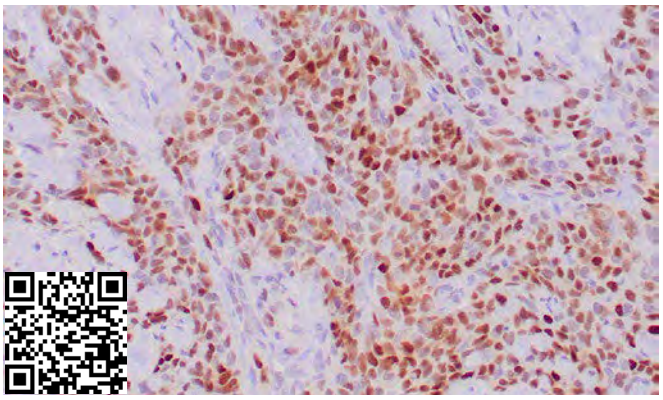


p21 (clone ZR288) IVD

This MAb is highly specific to p21. The expression of this gene acts as an inhibitor of the cell cycle during G1 phase and is tightly controlled by the tumor suppressor protein p53. Its expression is induced by the wild type, but not mutant, p53 suppressor protein. Normal cells generally display a rather intense nuclear p21 expression. Loss of p21 expression has been reported in many carcinomas (gastric carcinoma, non-small cell lung carcinoma, thyroid carcinoma). (more)

Species: Rabbit Monoclonal **Cat#:** Z2602

IHC: Human colon adenocarcinoma stained with ZR288

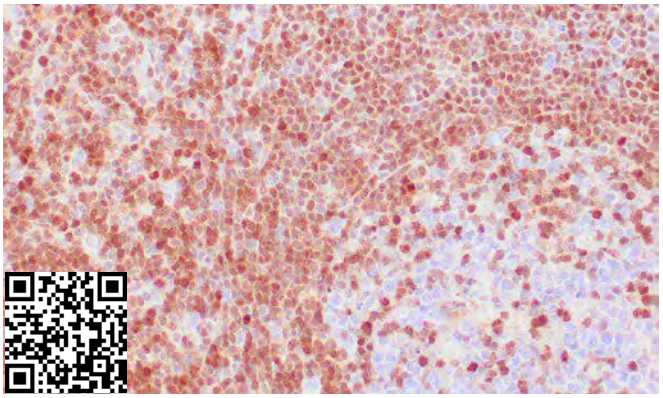


p27^{Kip1} (clone SX53G8) IVD

p57Kip2 (or CDKN1C) is a potent tight-binding inhibitor of several G1 cyclin complexes, and is a negative regulator of cell proliferation. The gene encoding human p57Kip2 is located on chromosome 11p15.5, a region implicated in both sporadic cancers, Wilm's tumor, and Beckwith-Wiedemann syndrome (BWS), a cancer syndrome, making it a tumor suppressor candidate. BWS is characterized by numerous growth abnormalities and an increased risk of childhood tumors. Several types of... (more)

Species: Mouse Monoclonal **Cat#:** Z2158

IHC: Human B-cell lymphoma stained with SX53G8

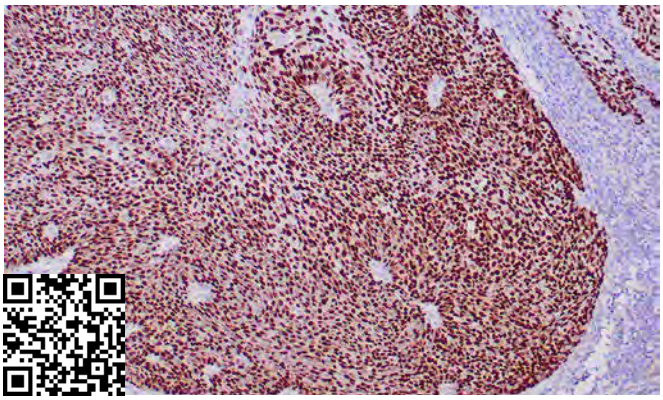


P40 (clone ZR303) IVD

In tumor tissues, p40 expression is specific for squamous cell carcinoma. p40 is equivalent to p63 in sensitivity for lung squamous cell carcinoma, but it is markedly superior to p63 in specificity, which eliminates a potential pitfall of misinterpreting a p63-positive adenocarcinoma or unsuspected lymphoma as squamous cell carcinoma. p40 appears to be a more reliable marker for squamous cell carcinoma. (more)

Species: Rabbit Monoclonal **Cat#:** Z2733

IHC: Lung squamous cell carcinoma stained with ZR303

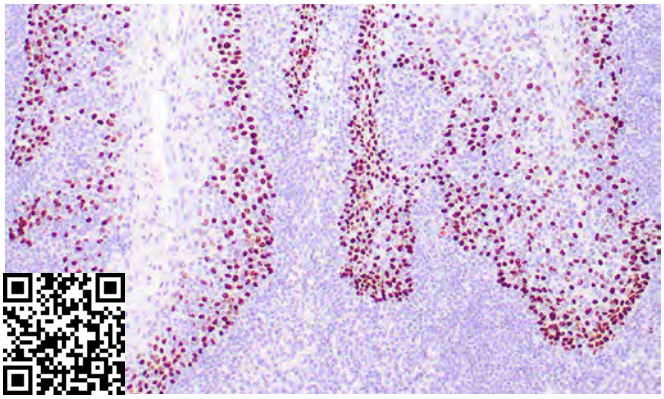


p40 (clone ZR8) IVD

p63 consists of two major isoforms-TAp63 and DNp63. These isoforms differ in the structure of the N-terminal domains. The TAp63 isoform (identified by anti-p63 antibody) contains a transactivation-competent 'TA' domain with homology to p53, which regulates the expression of the growth-inhibitory genes. In contrast, DNp63 isoform (identified by anti-p40 antibody) contains an alternative transcriptionally-inactive 'DN' domain, which antagonizes the activity of TAp63 and p53. The p40 (clone ZR8)... (more)

Species: Rabbit Monoclonal **Cat#:** Z2004

IHC: Human tonsil stained with stained with ZR8

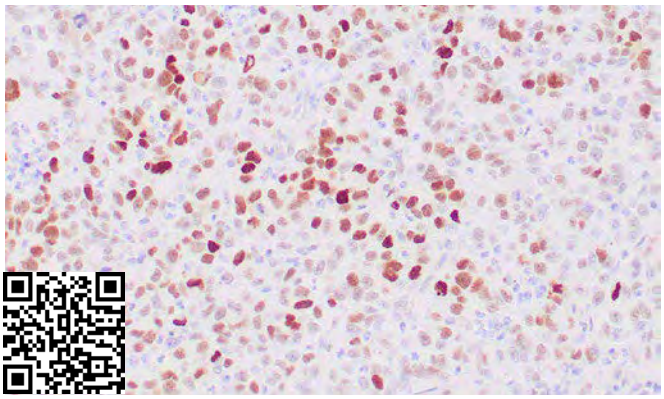


p53 (clone ZR153) IVD

This antibody recognizes a 53kDa protein, which is identified as p53 suppressor gene product. It reacts with the mutant as well as the wild form of p53 protein. p53 is a tumor suppressor gene expressed in a wide variety of tissue types and is involved in regulating cell growth, replication, and apoptosis. It binds to MDM2, SV40 T antigen and human papilloma virus E6 protein. Positive nuclear staining with p53 antibody has been reported to be a negative prognostic factor in breast carcinoma... (more)

Species: Rabbit Monoclonal **Cat#:** Z2466

IHC: Cervical invasive squamous cell carcinoma stained with ZR153

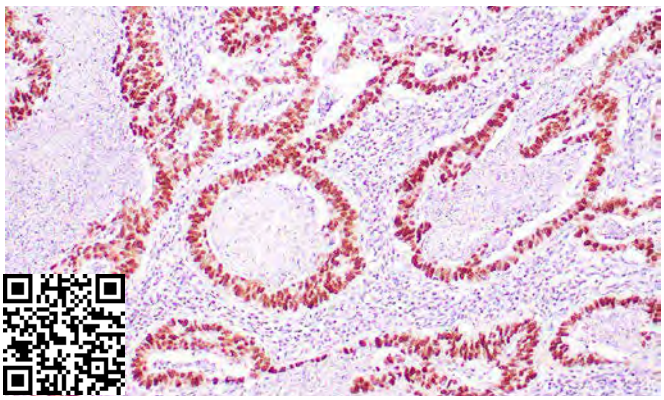


p53 (clone DO-7) IVD

p53 is a tumor suppressor gene expressed in a wide variety of tissue types and is involved in regulating cell growth, replication, and apoptosis. It binds to mdm2, SV40 T antigen and human papilloma virus E6 protein p53 senses DNA damage and possibly facilitating repair. Mutation involving p53 is found in a wide variety of malignant tumors, including breast, ovarian, bladder, colon, lung, and melanoma.

Species: Mouse Monoclonal **Cat#:** Z2029

IHC: Human breast carcinoma infiltrating fat stained with DO-7

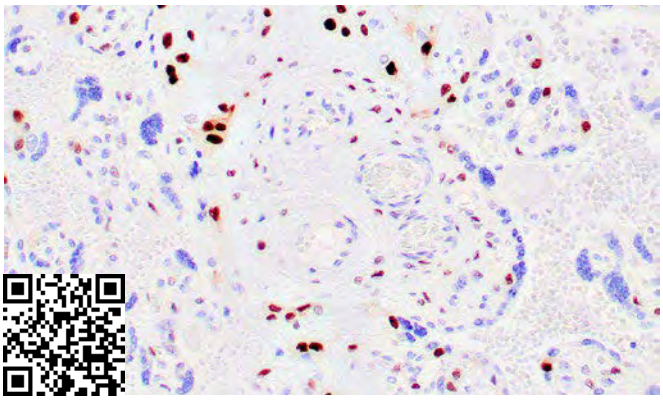


p57^{Kip2} (clone KP10) IVD

p57Kip2 (or CDKN1C) is a potent tight-binding inhibitor of several G1 cyclin complexes, and a negative regulator of cell proliferation. The gene encoding human p57Kip2 is located on chromosome 11p15.5, a region implicated in both sporadic cancers, Wilm's tumor, and Beckwith-Wiedemann syndrome (BWS), a cancer syndrome, making it a tumor suppressor candidate. BWS is characterized by numerous growth abnormalities and an increased risk of childhood tumors. Several types... (more)

Species: KP10 Monoclonal **Cat#:** Z2173

IHC: Human partial mole stained with KP10

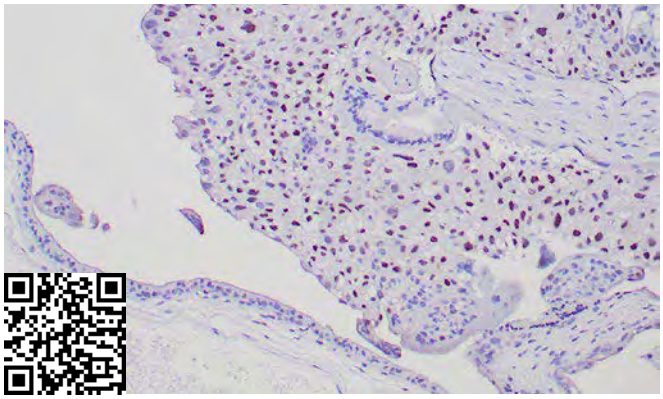


p57Kip2 (clone ZR230)

Recognizes 57kDa p57Kip2. It shows no cross-reaction with p27Kip1. Anti-p57 has been used as an aid in the identification of complete hydatidiform mole (CHM) (no nuclear labeling of cytotrophoblasts and stromal cells) from partial hydatidiform mole (PHM) in which both cytotrophoblasts and stromal cells stain. The histological differentiation of complete mole, partial mole, and hydropic spontaneous abortion is problematic. Most complete hydatidiform moles are diploid, whereas most... (more)

Species: Rabbit Monoclonal **Cat#:** Z2709

IHC: Human complete moles stained with ZR230

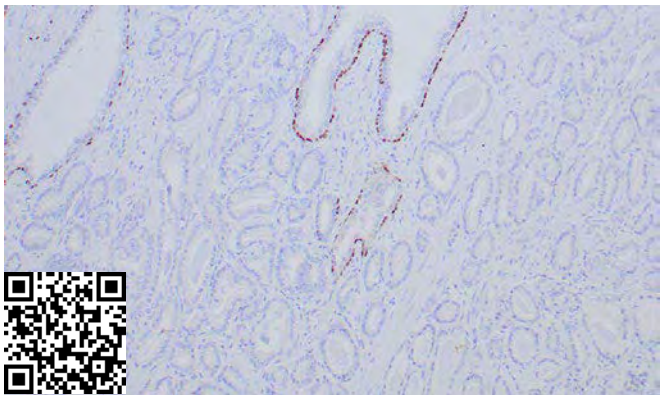


p63 (clone ZR439) IVD; RUO(EU)

p63 is a homolog of the tumor suppressor p53. It is identified in basal cells in the epithelial layers of a variety of tissues, including epidermis, cervix, urothelium, breast and prostate. p63 was detected in nuclei of the basal epithelium in normal prostate glands; however, it was not expressed in malignant tumors of the prostate. As a result, p63 has been reported as a useful marker for differentiating benign from malignant lesions in the prostate, particularly when used in combination with markers of high molecular weight cytokeratins and the prostate-specific ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2795

IHC: Human breast stained with ZR439

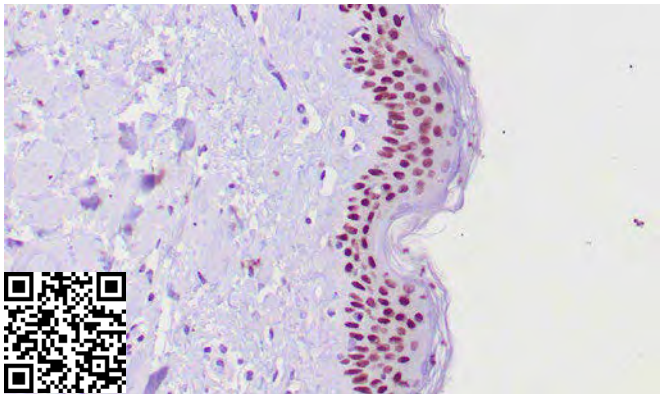


p63 (clone ZM70) IVD

p63 has been reported as a useful marker for differentiating benign from malignant lesions in the prostate, particularly when used in combination with markers of high molecular weight cytokeratins and the prostate-specific marker AMACR (P504S). p63 has also been shown to be a sensitive marker for lung squamous cell carcinomas (SqCC). Specificity for lung SqCC, vs. lung adenocarcinoma (LADC), is approximately... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2380

IHC: Human skin stained with ZM70

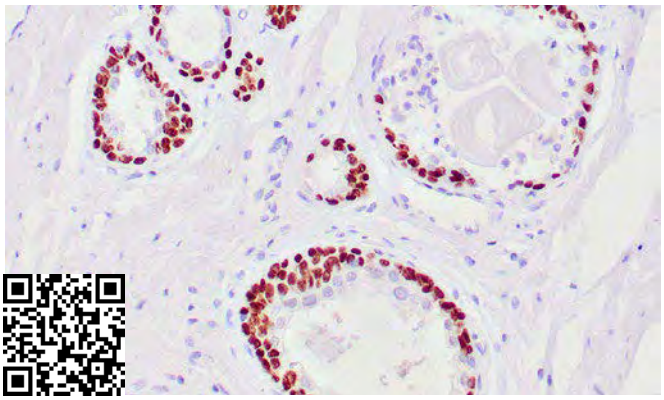


p63 (clone 4A4) RUO/RUO

p63 has been reported as a useful marker for differentiating benign from malignant lesions in the prostate, particularly when used in combination with markers of high molecular weight cytokeratins and the prostate-specific marker AMACR (P504S). p63 has also been shown to be a sensitive marker for lung squamous cell carcinomas (SqCC). Specificity for lung SqCC, vs. lung adenocarcinoma (LADC), is approximately... (more)

Species: Mouse Monoclonal **Cat#:** Z2003

IHC: Human breast stained with 4A4

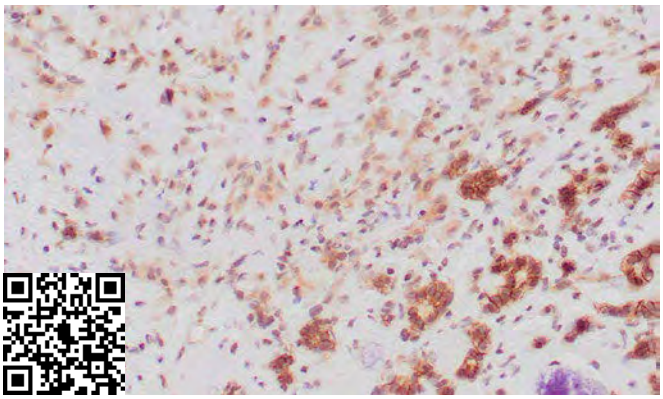


p120 (clone ZR316) IVD

p120 is a proliferation-associated nucleolar protein found in most human malignant tumors, but not in resting normal cells. In colorectal cancer, the altered localization of p120 catenin corresponds with a loss of cytoplasmic localization of E-cadherin. Studies have shown accurate categorization of ductal vs. lobular neoplasia in the breast was achieved with p120 staining. p120 expression further clarifies the separation of... (more)

Species: Rabbit Monoclonal **Cat#:** Z2620

IHC: Human breast lobular carcinoma stained with ZR316

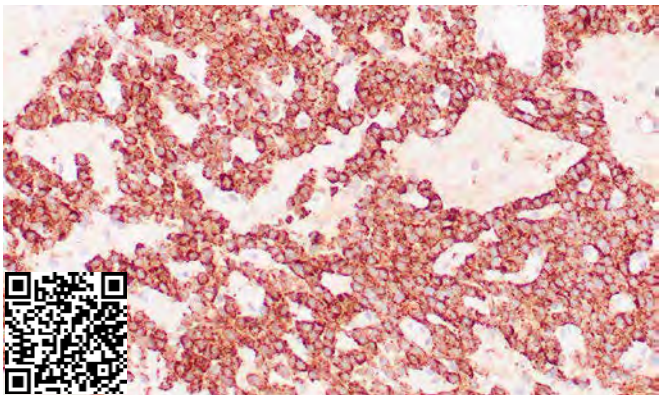


Parathyroid Hormone (clone ZM207) IVD

Defects in the PTH gene are a cause of familial isolated hypoparathyroidism (FIH); also called autosomal dominant hypoparathyroidism or autosomal dominant hypocalcemia. FIH is characterized by hypocalcemia and hyperphosphatemia due to inadequate secretion of parathyroid hormone. Symptoms are seizures, tetany and cramps. FIH exist both as autosomal dominant and recessive forms of hypoparathyroidism. (more)

Species: Mouse Monoclonal **Cat#:** Z2378

IHC: Human parathyroid gland stained with ZM207

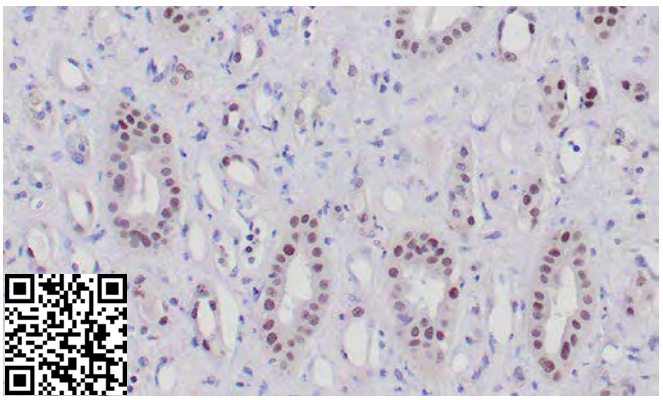


PAX-2 (clone ZR224) IVD

42kDa PAX2, one of the paired box transcription factors, is required for development and proliferation of the kidney, brain, and mullerian organs. In normal adult tissues, PAX2 is mainly detected in the urogenital system, including kidney, ureteric epithelium, fallopian tube epithelium, ovary and uterus. In tumors, PAX2 has been detected in renal cell carcinomas, Wilms' tumors, nephrogenic adenomas and papillary serous carcinoma of the ovary. PAX2 has been used as a marker... (more)

Species: Rabbit Monoclonal **Cat#:** Z2741

IHC: Human normal kidney stained with ZR224

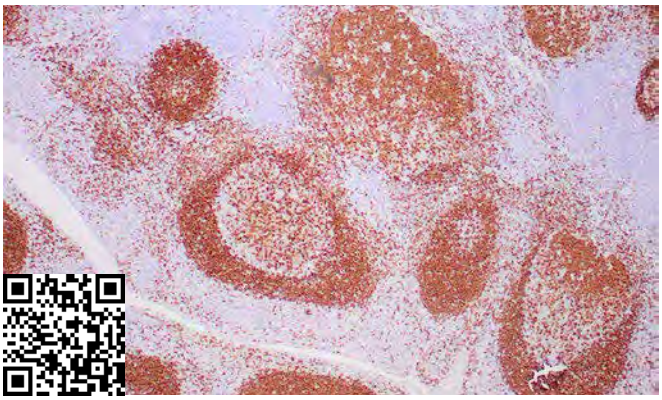


PAX-5 (clone ZR268) IVD

PAX proteins are important regulators in early development, and alterations in the expression of their genes are thought to contribute to neoplastic transformation. Its expression has also been detected in developing CNS and testis; therefore, PAX-5 gene product may not only play an important role in B-cell differentiation, but also in neural development and spermatogenesis. (more)

Species: Rabbit Monoclonal **Cat#:** Z2582

IHC: Human tonsil stained with ZR268

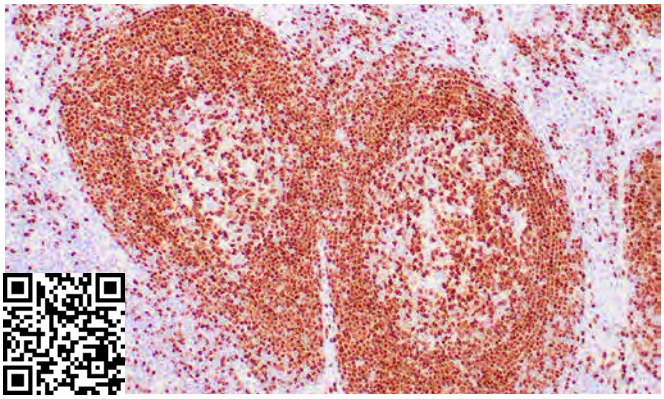


PAX-5 (clone ZM26) IVD

PAX proteins are important regulators in early development, and alterations in the expression of their genes are thought to contribute to neoplastic transformation. Its expression has also been detected in developing CNS and testis; therefore, PAX-5 gene product may not only play an important role in B-cell differentiation, but also in neural development and spermatogenesis. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2354

IHC: Human lymph node stained with ZM26

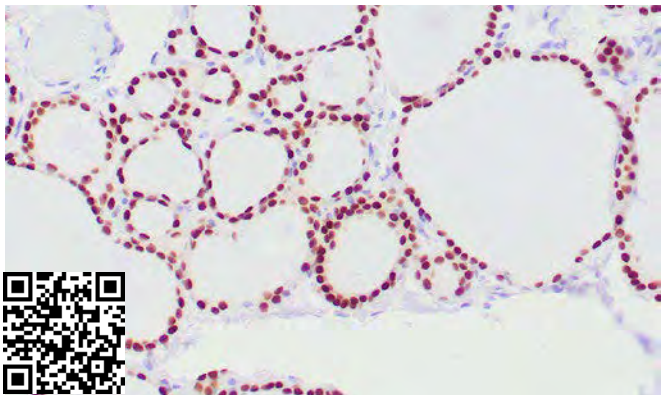


PAX-8 (clone ZR1) IVD

Mutations in this gene have been associated with thyroid dysgenesis, thyroid follicular carcinomas, and atypical thyroid adenomas. PAX-8 is expressed in the thyroid (and associated carcinomas), non-ciliated mucosal cells of the fallopian tubes, and simple ovarian inclusion cysts, but not normal ovarian surface epithelial cells. ZR1 rabbit monoclonal antibody does not react with pancreatic neuroendocrine tumors, thymic tumors, and lymphocytes. PAX-8 is expressed in a high percentage of ovarian serous... (more)

Species: Rabbit Monoclonal **Cat#:** Z2202

IHC: Human thyroid gland stained with ZR1

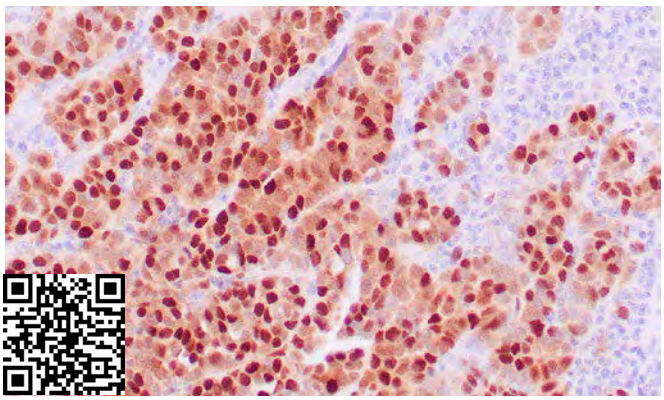


PAX-8 (clone ZM28) IVD

Mutations in this gene have been associated with thyroid dysgenesis, thyroid follicular carcinomas, and atypical thyroid adenomas. PAX-8 is expressed in the thyroid (and associated carcinomas), non-ciliated mucosal cells of the fallopian tubes, and simple ovarian inclusion cysts, but not normal ovarian surface epithelial cells. PAX-8 antibody may be used as an additional immunohistochemical marker for renal epithelial tumors. PAX-8 is expressed in a high percentage of ovarian serous, endometrioid, and... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2357

IHC: Human thyroid carcinoma stained with ZM28

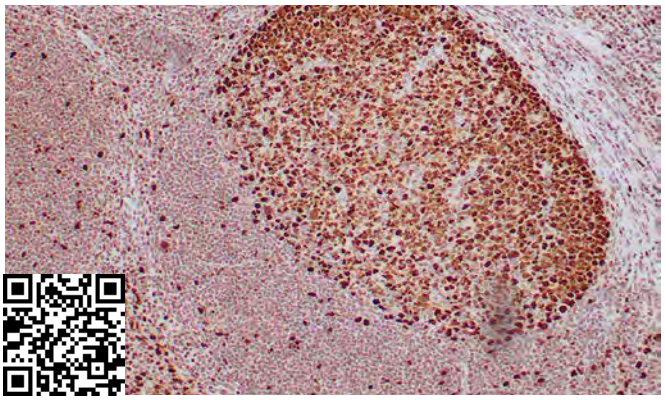


PCNA (clone ZR378) IVD

Recognizes a non-histone protein of 36kDa, which is identified as proliferating cell nuclear antigen (PCNA). It is also known as cyclin or polymerase delta auxiliary protein. Elevated expression of PCNA/cyclin has been shown in the nucleus during the late G1 phase immediately before the onset of DNA synthesis, becoming maximal during S-phase and declining during G2 and M phases. This MAb is excellent for multiple applications.

Species: Rabbit Monoclonal **Cat#:** Z2669

IHC: Human tonsil stained with ZR378

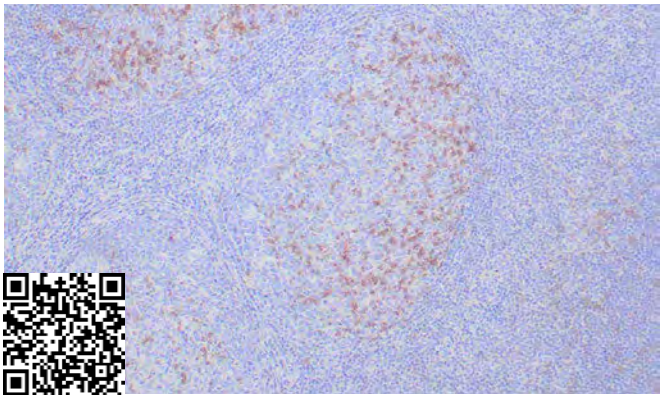


PD-1 (PDCD1) (clone ZR408) IVD; RUO(EU)

PDCD-1 is expressed on activated T-cells, B-cells, and myeloid cells. Anti-PDCD-1 is a marker of angioimmunoblastic lymphoma and suggests a unique cell of origin for this neoplasm. Unlike CD10 and BCL6, PDCD-1 is expressed by few B-cells, so anti-PDCD-1 may be a more specific and valuable diagnostic marker in angioimmunoblastic lymphoma. In addition, PDCD-1 expression provides evidence that angioimmunoblastic lymphoma is a neoplasm derived from germinal center-associated T-cells.

Species: Rabbit Monoclonal **Cat#:** Z2764

IHC: Human tonsil stained with ZR408

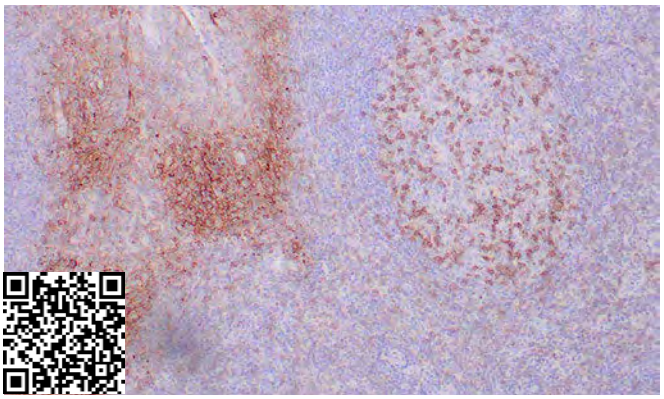


PD-1 (PDCD1) (clone ZM357)

PDCD-1 (programmed cell death-1 protein), designated CD279, is a type I transmembrane receptor and a member of the immunoglobin gene superfamily. It is expressed on activated T-cells, B-cells, and myeloid cells. Anti-PDCD-1 is a marker of angioimmunoblastic lymphoma and suggests a unique cell of origin for this neoplasm. Unlike CD10 and BCL6, PDCD-1 is expressed by few B-cells, so anti-PDCD-1 may be a more specific and valuable diagnostic marker in angioimmunoblastic lymphoma. (more)

Species: Mouse Monoclonal **Cat#:** Z2424

IHC: Human tonsil stained with ZM357

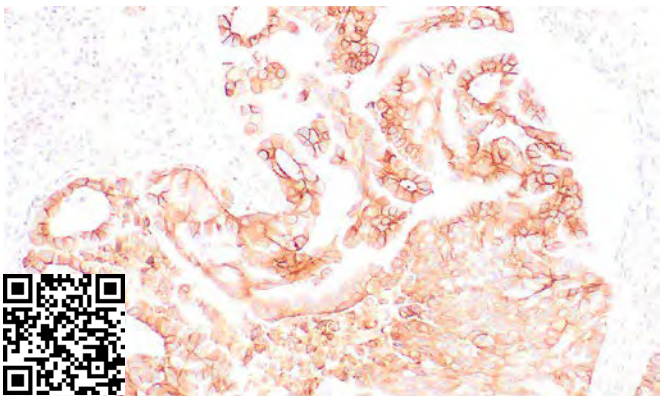


PD-L1 (clone ZR3) IVD

The interaction of PD-L1 with its receptor PD-1 in involved with regulating T cell activation and tolerance during pregnancy, tissue allografts, autoimmune disease and malignant transformation. Binding of PD-L1 to PD-1 induces apoptosis or exhaustion in activated T cells, and blockade of this interaction has been shown to enhance the antitumor activity of T cells. PD-L1 is frequently over expressed in placenta, and many human tumors such as melanoma, diffuse large B-cell lymphoma, and carcinomas... (more)

Species: Rabbit Monoclonal **Cat#:** Z2002

IHC: Human lung adenocarcinoma stained with ZR3

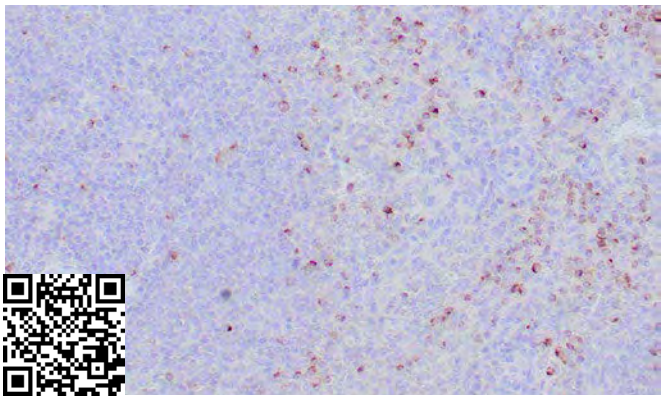


Perforin (clone ZR270) IVD; RUO(EU)

Perforin is a pore-forming protein that leads to osmotic lysis of the target cells and subsequently enables granzymes to enter the target cells and activate apoptosis and is a main cytolytic protein of cytolytic granules and is known to be a key effector molecule for T-cell- and natural killer-cell-mediated cytolysis. Defects in this gene cause familial hemophagocytic lymphohistiocytosis type 2 (HPLH2). The expression of perforin is reportedly upregulated in activated CD8+ T-cells, natural killer cells and some CD4+ T-cells.

Species: Rabbit Monoclonal **Cat#:** Z2584

IHC: Human spleen stained with ZR270

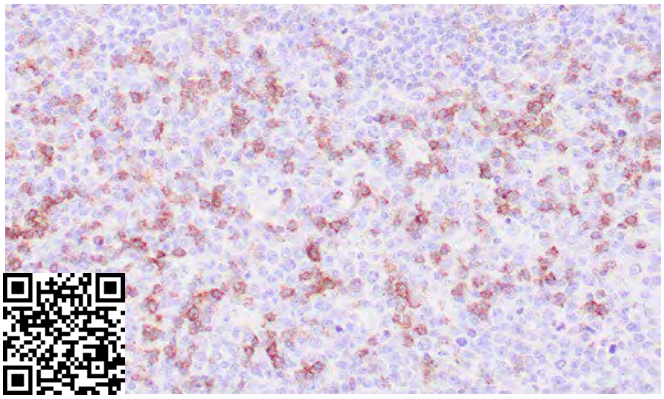


Perforin (clone ZM159) IVD

Perforin is a pore-forming protein that leads to osmotic lysis of the target cells and subsequently enables granzymes to enter the target cells and activate apoptosis and is a main cytolytic protein of cytolytic granules and is known to be a key effector molecule for T-cell- and natural killer-cell-mediated cytolysis. Defects in this gene cause familial hemophagocytic lymphohistiocytosis type 2 (HPLH2). The expression of perforin is reportedly upregulated in activated CD8+ T-cells, natural killer cells and some CD4+ T-cells.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2472

IHC: Human spleen stained with ZM159

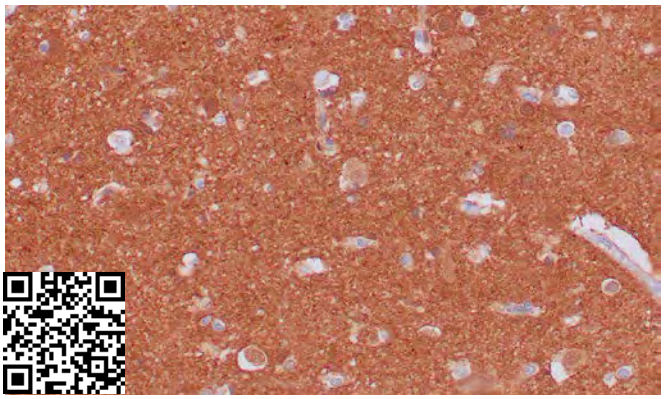


PGP9.5 (clone ZR401) IVD; RUO(EU)

MAb reacts with 20-30kDa PGP9.5. Initially, PGP9.5 expression in normal tissues was reported in neurons and neuroendocrine cells but later it was found in the distal renal tubular epithelium, spermatogonia, Leydig cells, oocytes, melanocytes, prostatic secretory epithelium, ejaculatory duct cells, epididymis, mammary epithelial cells, Merkel cells, and dermal fibroblasts. IHC staining for PGP9.5 has been shown in a wide variety of mesenchymal neoplasms as well. A mutation in PGP9.5 gene is believed to cause a form of Parkinson's disease. (more)

Species: Rabbit Monoclonal **Cat#:** Z2757

IHC: Human brain stained with ZR401

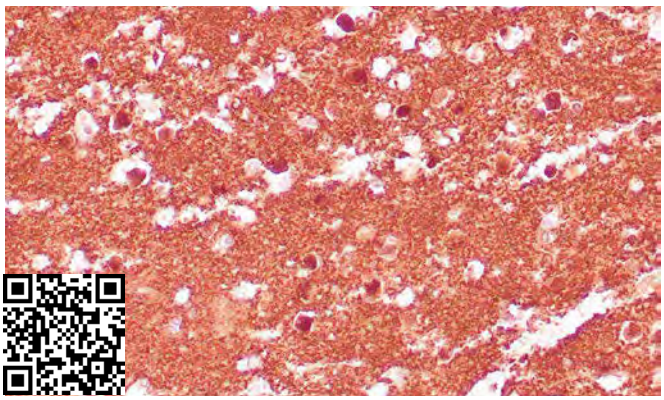


PGP9.5 (clone ZM160) IVD

PGP9.5 expression in normal tissues was reported in neurons and neuroendocrine cells but later it was found in distal renal tubular epithelium, spermatogonia, Leydig cells, oocytes, melanocytes, prostatic secretory epithelium, ejaculatory duct cells, epididymis, mammary epithelial cells, Merkel cells, and dermal fibroblasts. Immunostaining for PGP9.5 has been shown in a wide variety of mesenchymal neoplasms as well. A mutation in PGP9.5 gene is believed to cause a form of Parkinson's disease. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2473

IHC: Human cerebellum stained with ZM160

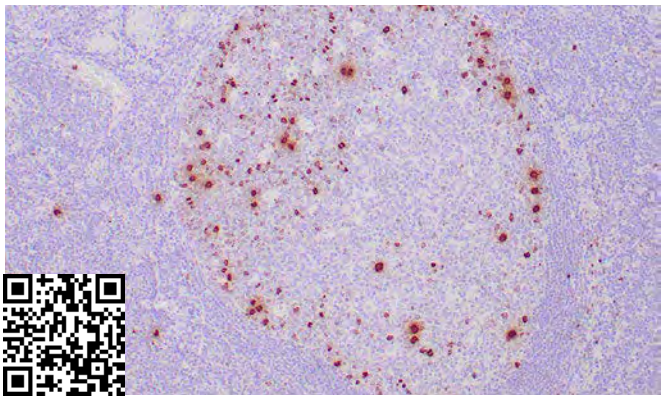


PHH3 (clone ZR285) IVD

Phosphohistone H3 (PHH3) is a marker specific for cells undergoing mitosis. Increased expression of PHH3was significantly associated with tumor thickness (p = 0.031), presence of tumor ulceration (p =0.041) and tumor necrosis (p =0.027), but not with Clark's level of invasion. For central nervous system tumors, melanoma, soft tissue tumors, GIST, etc., PHH3 mAb is helpful for tumor pathological classification and prognosis. (more)

Species: Rabbit Monoclonal **Cat#:** Z2600

IHC: Human tonsil stained with ZR285

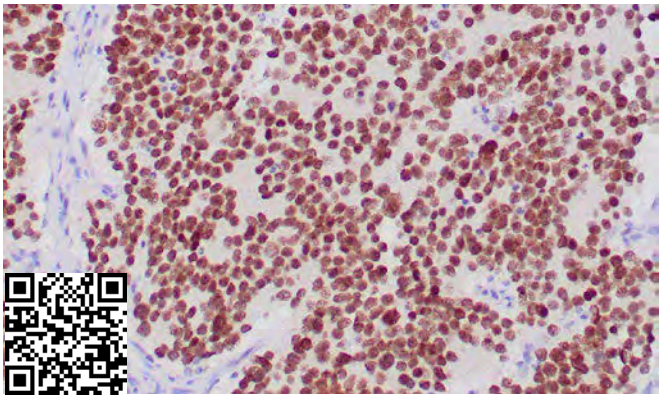


PHOX2B (clone ZR292)

Paired homeobox protein 2B (PHOX2B) is a transcription factor located on chromosome 4p13, which is essential for forming autonomic ganglia in the autonomic nervous system. PHOX2B is expressed in neuroblastoma, brain, and adrenal glands. PHOX2B deficiency can lead to susceptibility to congenital central hypoventilation syndrome (CCHS) and neuroblastoma type 2 (NBLST2).

Species: Rabbit Monoclonal **Cat#:** Z2730

IHC: Human neuroblastoma stained with ZR292

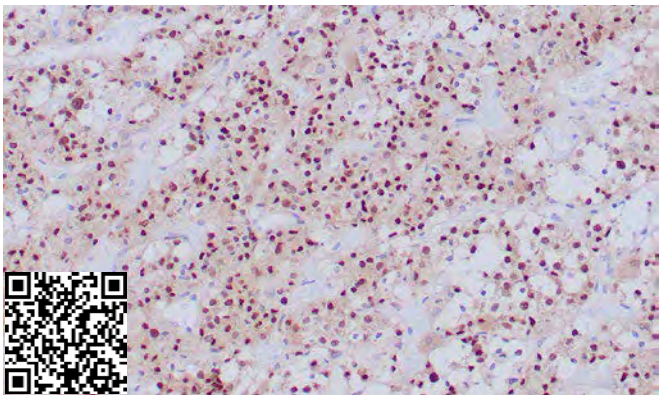


PIT-1/POU1F1 (clone ZR440) IVD; RUO(EU)

Transcriptional regulators play a critical role in development by mediating tissue- and cell-specific transcription. POU domain factors are transcriptional regulators characterized by a bipartite DNA binding domain consisting of two highly conserved regions, tethered by a variable linker of 14-26 amino acids. Pit-1, also known as growth hormone factor-1 (GHF-1), a member of the POU homeodomain family, is essential for the normal development of the anterior pituitary gland, where it is required to form ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2796

IHC: Human pituitary stained with ZR440

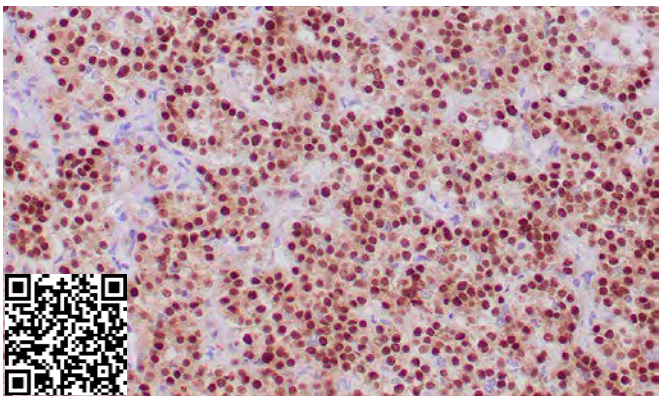


PIT-1/POU1F1 (clone ZM385)

Pit-1, also known as growth hormone factor-1 (GHF-1) is essential for the normal development of the anterior pituitary gland. Pit-1 acts as a repressor of gene expression, which allows for the differentiation of specific cell types. Mutations in the Pit-1 gene are believed to result in combined pituitary hormone deficiency (CPHD) for growth hormone, Prolactin, and thyroid-stimulating hormone. The gene which encodes Pit-1 maps to human chromosome 3p11.2. (more)

Species: Mouse Monoclonal **Cat#:** Z2676

IHC: Human pituitary stained with ZM385

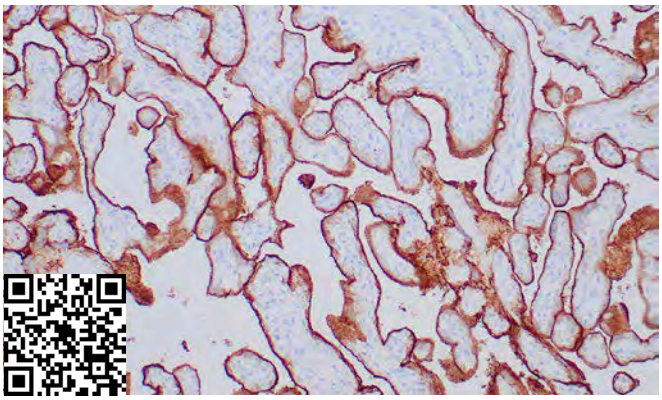


PLAP (clone ZR441) IVD; RUO(EU)

Reacts with a 70kDa membrane-bound isozyme (Regan and Nagao type) of Placental Alkaline Phosphatase (PLAP) occurring in the placenta during the 3rd trimester of gestation. It is highly specific for PLAP and shows no cross-reaction with other isozymes of alkaline phosphatase. Anti-PLAP reacts with germ cell tumors and can discriminate between these and other neoplasms. Somatic neoplasms e.g. breast, gastrointestinal, prostatic, and urinary cancers may also immunoreact with antibodies to PLAP. Anti-PLAP positivity in conjunction with anti-keratin negativity favors ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2797

IHC: Human placenta stained with ZR441

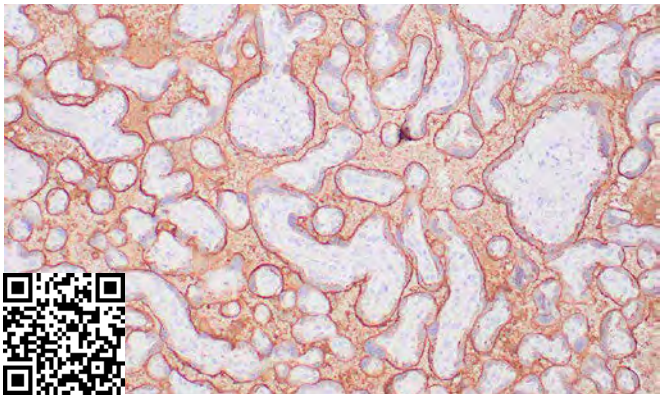


PLAP (clone ZM161) IVD

Anti-PLAP reacts with germ cell tumors and can discriminate between these and other neoplasms. Somatic neoplasms e.g. breast, gastrointestinal, prostatic, and urinary cancers may also immunoreact with antibodies to PLAP. Anti-PLAP positivity in conjunction with anti-keratin negativity favors seminoma over carcinoma. Anti-PLAP has been useful in the diagnosis of gestational trophoblastic disease. (more)

Species: Mouse Monoclonal **Cat#:** Z2474

IHC: Human placenta stained with ZM161

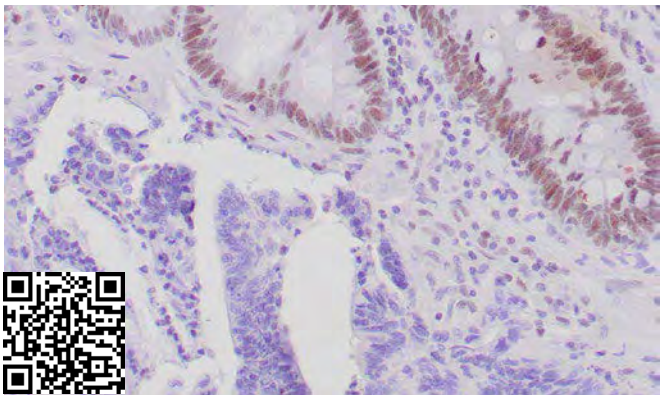


PMS2 (clone ZR317) IVD

PMS2 is involved in DNA mismatch repair. Defects in PMS2 are the cause of hereditary non-polyposis colorectal cancer type 4 (HNPCC4). Mutations in more than one gene locus can be involved alone or in combination in the production of the HNPCC phenotype (also called Lynch syndrome). Most families with clinically recognized HNPCC have mutations in either MLH1 or MSH2 genes. HNPCC is an autosomal, dominantly inherited disease associated with a marked increase in cancer susceptibility. (more)

Species: Rabbit Monoclonal **Cat#:** Z2621

IHC: Human colon adenocarcinoma stained with ZR317

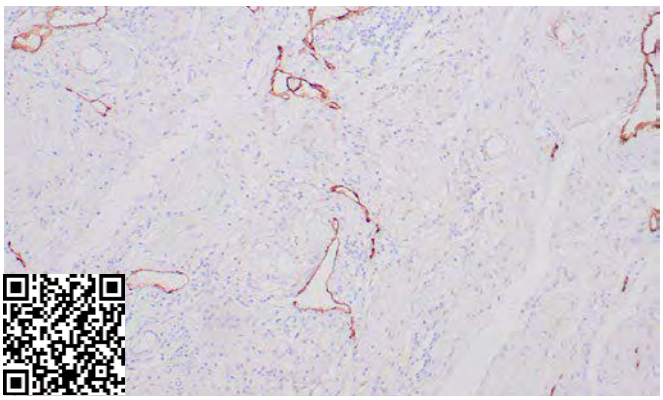


Podoplanin (clone ZR442) IVD

Recognizes a muco-protein of 38-43kDa, which is identified as Podoplanin (PDPN). It is located in stromal cells of peripheral lymphoid tissue and thymic epithelial cells. As a regulator of the lymphatic endothelium, podoplanin probably plays a role in maintaining the unique shape of podocytes. It is selectively expressed in lymphatic endothelium as well as lymphangiomas, Kaposi sarcomas, and in a subset of angiosarcomas with probable lymphatic differentiation. Recent studies have also shown podoplanin to be a highly sensitive and relatively specific marker for... (more).

Species: Rabbit Monoclonal **Cat#:** Z2798

IHC: Human testicle stained with ZR442

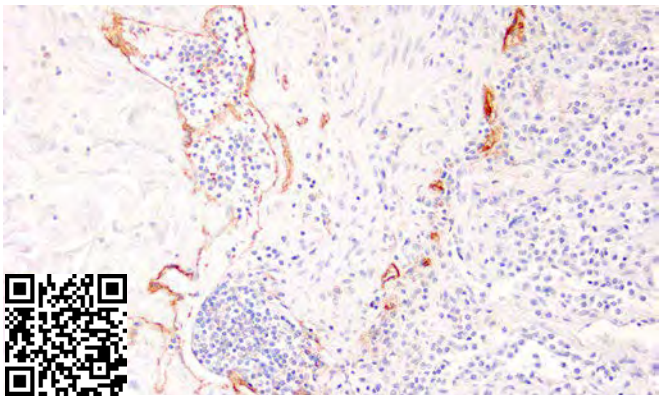


Podoplanin (clone ZM31) IVD; RUO(EU)

As a regulator of the lymphatic endothelium, podoplanin probably plays a role in maintaining the unique shape of podocytes. It is selectively expressed in lymphatic endothelium as well as lymphoangiomas, Kaposi sarcomas, and in a subset of angiosarcomas with probable lymphatic differentiation. Podoplanin is a highly sensitive and relatively specific marker for epithelioid mesothelioma and used in a panel to distinguish mesotheliomas or mesothelial cells from pulmonary carcinomas.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2338

IHC: Human lymph node stained with ZM31

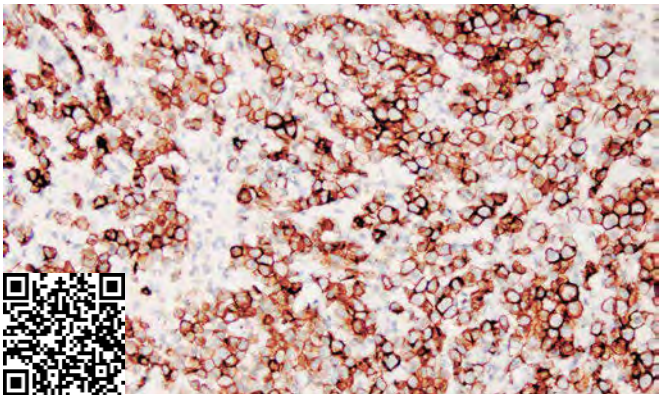


Podoplanin (clone D2-40) IVD

D2-40 reacts with a O-linked sialoglycoprotein found on lymphatic endothelium, fetal testis and on the surface of testicular germ cell tumors. In recent studies (see datasheet) clone D2-40 have shown staining in lymphatic channel endothelium but not in the adjacent capillary. In the same study, Clone D2-40 has shown staining in endothelium of lymphangiomas whereas hemangiomas, glomus tumors, angiolipomas, pyogenic granulomas, vascular malformations did not show any staining. (more)

Species: Mouse Monoclonal **Cat#:** Z2097

IHC: Human testicular seminoma stained with D2-40

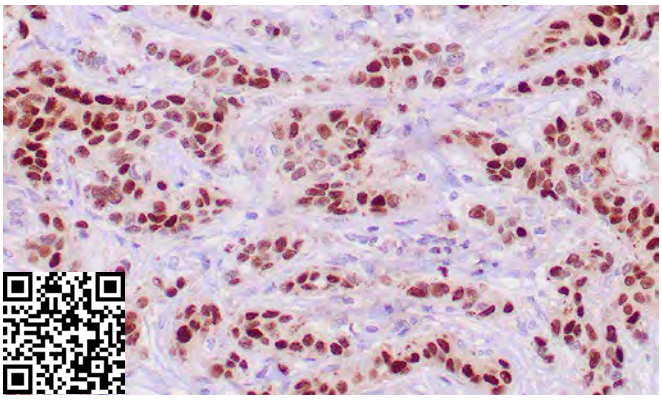


PR (clone ZR4) ASR/IVD

The progesterone receptor (PR) is an estrogen regulated protein. It has been proposed that expression of PR determination indicates a responsive estrogen receptor (ER) pathway, and therefore, may predict likely response to endocrine therapy in human breast cancer. PR determination provides supplementary information to ER, both in predicting response to endocrine therapy and estimating survival. PR has proved superior to ER as a prognostic indicator in some studies. (more)

Species: Rabbit Monoclonal **Cat#:** Z2023

IHC: Human breast carcinoma stained with ZR4

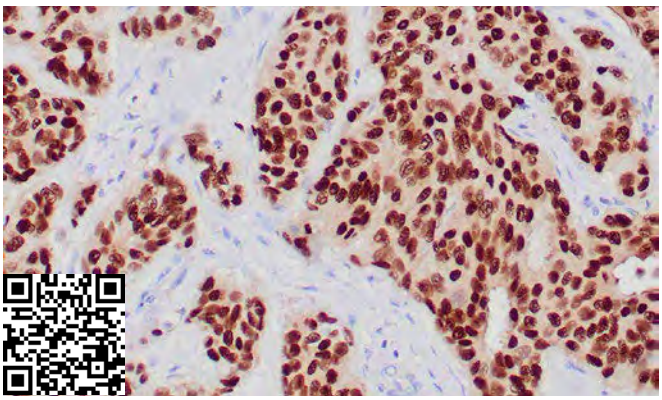


PR (clone ZR290) IVD

Progesterone is one of the central regulators of female reproduction. Progesterone receptor (PR) is predominantly expressed in female sex steroid-responsive tissues such as the mammary gland, uterus, and ovary but is also found in other tissues such as endocrine cells of the Langerhans' islets. The estrogen receptor (ER) and PR status have been used for over 20 years to predict breast carcinoma responsiveness to endocrine therapy and as a prognostic indicator for early recurrence. (more)

Species: Rabbit Monoclonal **Cat#:** Z2728

IHC: Human breast carcinoma stained with ZR290

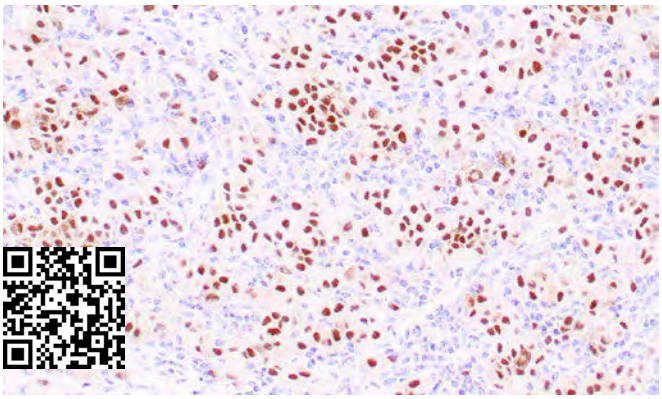


PRAME (clone ZR383) IVD; RUO(EU)

A transcriptional repressor, inhibiting retinoic acid signaling. Gene encodes an antigen that is preferentially expressed in human melanomas and that is recognized by cytolytic T lymphocytes. It is not expressed in normal tissues, except testis. The encoded protein acts as a repressor of retinoic acid receptor, and likely confers a growth advantage to cancer cells via this function. Clone ZR383 is useful in differentiating malignant melanoma from benign nevi.

Species: Rabbit Monoclonal **Cat#:** Z2674

IHC: Liver with metastatic melanoma stained with ZR383

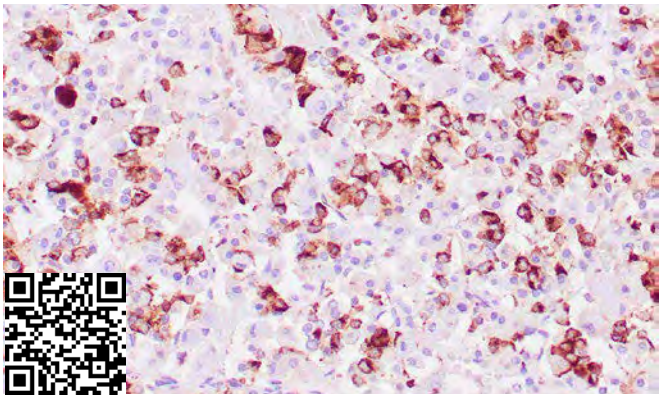


Prolactin (clone ZM203) IVD

Prolactin (PRL) is a single-chain polypeptide of 226 amino acids secreted by the anterior pituitary. It plays a role in multiple processes including cell growth, reproduction, and immune function. Anti-prolactin reacts with prolactin-producing cells and is a useful marker in classification of pituitary tumors and the study of pituitary diseases. It also plays a role in the development of mammary cancer, functioning dually as a mitogen and a differentiating agent.

Species: Mouse Monoclonal **Cat#:** Z2523

IHC: Human pituitary gland stained with ZM203

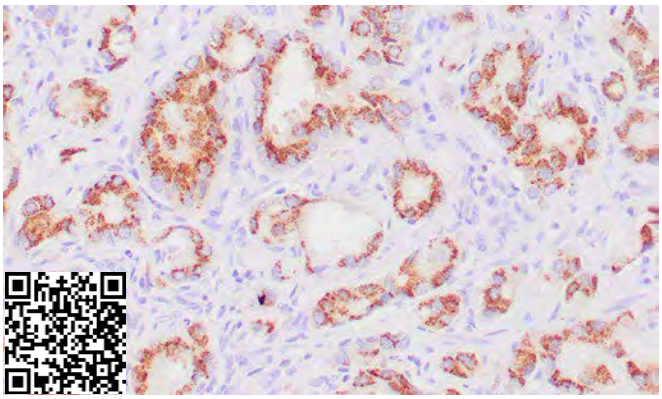


Prostein (P501S) (clone ZR9) IVD

By immunohistochemistry, prostein is expressed in the vast majority of normal and malignant prostatic tissues, regardless of grade and metastatic status. No protein expression is detected in normal and malignant tissue samples representing the great majority of esasential tissues and tumors. In particular, prostein is expressed in most of poorly differentiated prostatic carcinoma, including small cell prostate carcinoma. Prostein is more specific and sensitive for prostatic carcinomas than PSA and PSAP.

Species: Rabbit Monoclonal **Cat#:** Z2006

IHC: Human prostatic tissue stained with ZR9

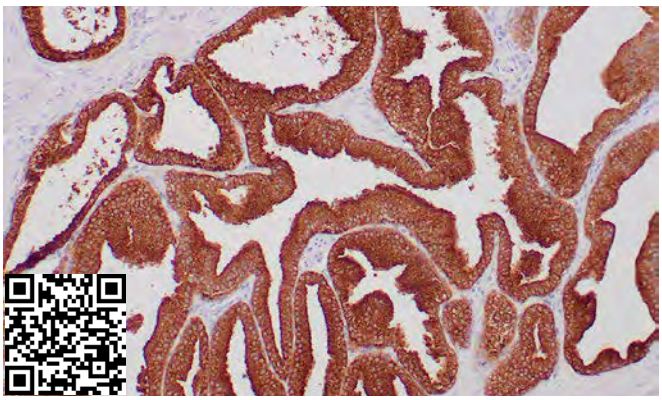


PSA (clone ZR232) IVD

PSA is expressed in the highly specialized apically-superficial layer of female and male secretory cells of the prostate gland and is readily demonstrated in adenocarcinomas of the prostate in about 99% of the cases. There is a correlation between malignancy grade and intensity of staining, high-grade carcinomas displaying a weaker expression. About 1% of poorly differentiated carcinomas have been negative for PSA. Due to the high specificity of PSA for prostatic glandular... (more)

Species: Rabbit Monoclonal **Cat#:** Z2710

IHC: Human prostate stained with ZR232



PSAP (clone ZR443)

IVD; RUO(EU)

Recognizes a protein of 52kDa, identified as prostate specific acid phosphatase (PSAP). This enzyme catalyzes the conversion of orthophosphoric monoester to alcohol and orthophosphate. It is synthesized under androgen regulation and is secreted by the epithelial cells of the prostate gland. PSAP is found in non-neoplastic adult and fetal prostatic glands, primary and metastatic prostatic carcinomas. It shows no staining in granulocytes, osteoclasts, parietal cells of the stomach, liver cells, renal cell or breast carcinomas.

Species: Rabbit Monoclonal **Cat#:** Z2799

IHC: Human prostate stained with ZR443

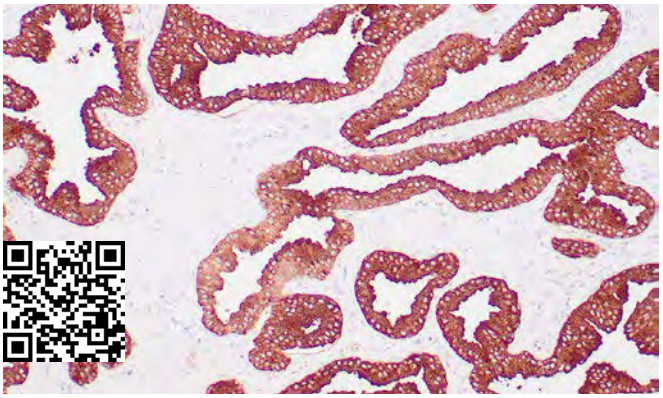
PSAP (clone ZM162)

IVD

Prostate specific acid phosphatase (PSAP) catalyzes the conversion of orthophosphoric monoester to alcohol and orthophosphate. It is synthesized under androgen regulation and is secreted by the epithelial cells of the prostate gland. PSAP is found in non-neoplastic adult and fetal prostatic glands, primary and metastatic prostatic carcinomas. It shows no staining in granulocytes, osteoclasts, parietal cells of the stomach, liver cells, renal cell or breast carcinomas.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2475

IHC: Human prostate stained with ZM162



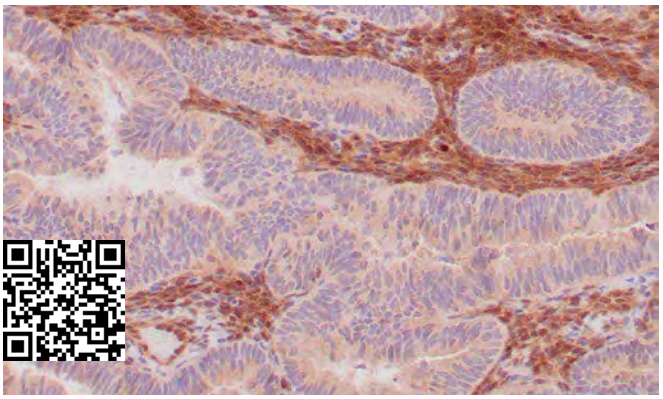
PTEN (clone ZR235)

IVD; RUO(EU)

PTEN (phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase) contains a tensin-like domain as well as a catalytic domain similar to that of the dual specificity protein tyrosine phosphatases. It was identified as a tumor suppressor that is mutated in a large number of cancers, including sporadic brain, breast, endometrial, kidney, and prostate cancers.

Species: Rabbit Monoclonal **Cat#:** Z2711

IHC: Human endometrioid adenocarcinoma stained with ZR235



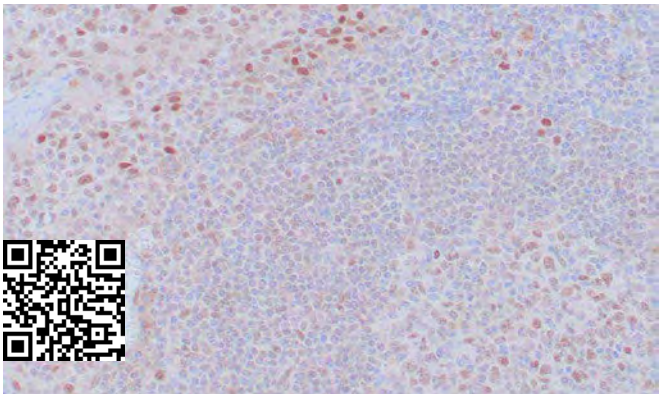
Rb (clone ZR444)

IVD; RUO(EU)

Recognizes a 105kDa phosphoprotein, identified as retinoblastoma (Rb) gene product. It shows no cross reaction with p107 or p130. It reacts with the hyper-phosphorylated as well as the un (under) phosphorylated form of the Rb protein. Retinoblastoma gene product plays a key role in cell cycle control. It has been identified as a tumor suppressor gene whose loss of its function leads to tumor development. It is widely expressed in a variety of human tissues including breast, esophageal, squamous cell and ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2800

IHC: Human tonsil stained with ZR444

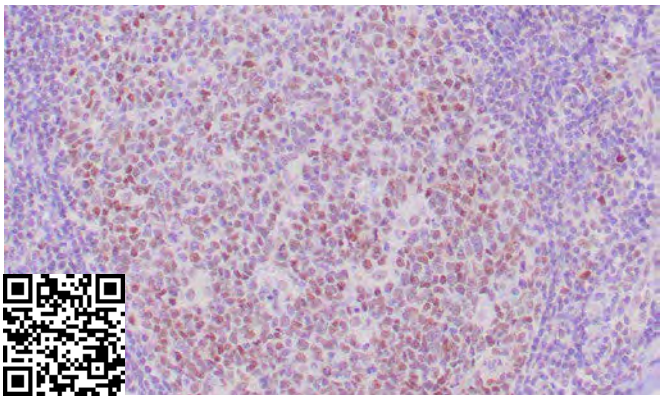


Rb (clone 1F8) IVD

This MAb to retinoblastoma specifically stains the nuclei of BT-20 cells and primary human foreskin fibroblast (HFF) cells. It does not stain the Rb-negative BT549 cells. Retinoblastoma gene product plays a key role in cell cycle control and is a tumor suppressor gene whose loss of its function leads to tumor development. It is widely expressed in a variety of human tissues including breast, esophageal, squamous cell and cervical carcinoma.

Species: Mouse Monoclonal **Cat#:** Z2651

IHC: Human tonsil stained with 1F8

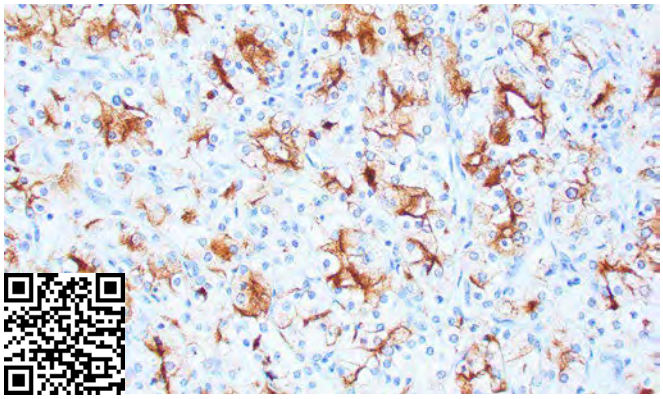


RCC (clone 66.4.C2) IVD

66.4.C2 may be a useful reagent in the investigations of carcinomas of proximal nephrogenic differentiation especially those showing tubular differentiation. In normal kidney, gp200 is localized along the brush border of the pars convoluta and pars recta segments of the proximal tubule, as well as focally along the luminal surface of Bowman's capsule adjoining the outgoing proximal tubule. Of other normal tissues examined, the gp200 is also localized along the luminal surfaces of... (more)

Species: Mouse Monoclonal **Cat#:** Z2256

IHC: Clear cell renal cell carcinoma stained with 66.4.C2

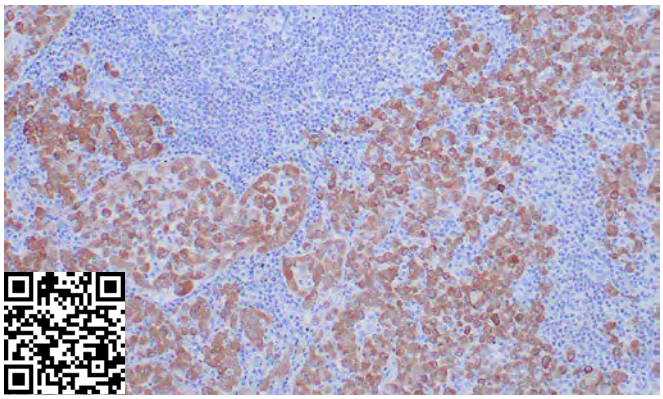


ROS1 (clone ZR400) IVD; RUO(EU)

ROS1, an orphan receptor tyrosine kinase of the insulin receptor family, was initially identified as a homolog of v-ros from the UR2 sarcoma virus. ROS1 consists of a large extracellular domain composed of six fibronectin repeats, a transmembrane domain, and an intracellular kinase domain. While the function of ROS1 is undefined, it has been shown to play an essential role in the differentiation of epididymal epithelium. The first oncogenic fusion of ROS1, FIG-ROS1, was initially identified by ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2756

IHC: Metastatic lung adenocarcinoma stained with ZR400

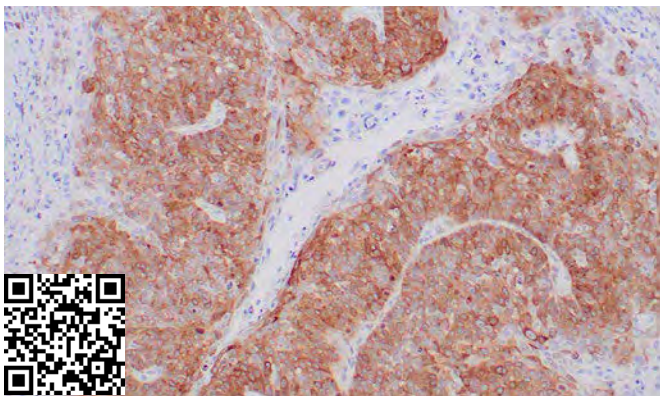


RRM1 (clone ZR114) IVD

Ribonucleotide reductase M1 polypeptide (RRM1) is one of two non-identical subunits for ribonucleoside-diphosphate reductase that catalyzes the biosynthesis of deoxyribonucleotides from corresponding ribonucleotides. RRM1 is present throughout the cell division cycle but downregulated in quiescent cells. RRM1 is involved in carcinogenesis, tumor progression, and the response of non-small-cell lung cancer (NSCLC) to chemotherapy.

Species: Rabbit Monoclonal **Cat#:** Z2418

IHC: Human head and neck small cell carcinoma stained with ZR114

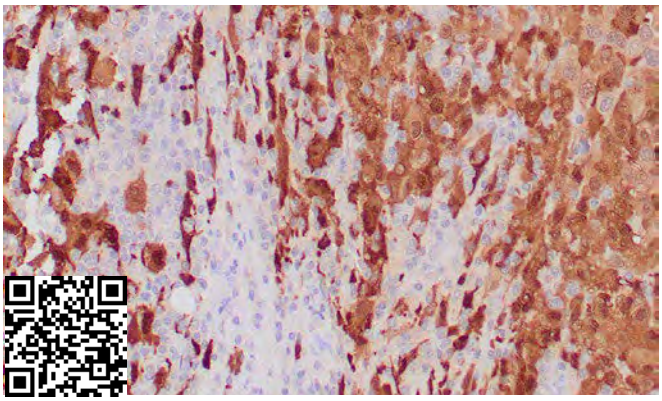


S-100 (clone 4C4.9) IVD

S100 protein is expressed in the antigen presenting cells such as the Langerhans cells in skin and interdigitating reticulum cells in the paracortex of lymph nodes. Antibody to S100 stains Schwannomas, ependymomas, astrogliomas, almost all benign and malignant melanomas and their metastases. Ab-1 is excellent for immunohistochemical staining of formalin-fixed, paraffin embedded tissues. S100 protein is highly soluble and may be eluted from frozen tissue during staining tissues. (more)

Species: Mouse Monoclonal **Cat#:** Z2055

IHC: Human melanoma stained with 4C4.9

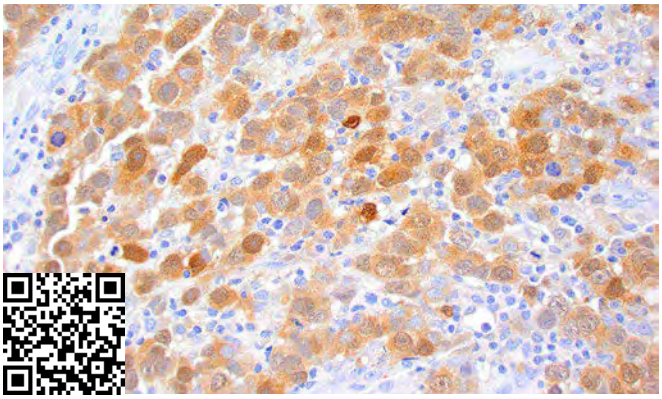


S-100B (clone ZR379) IVD; RUO(EU)

ZR379 can be used to localize S-100A and S-100B in various tissue sections. S-100 protein has been found in normal melanocytes, Langerhans cells, histiocytes, chondrocytes, lipocytes, skeletal and cardiac muscle, Schwann cells, epithelial and myoepithelial cells of the breast, salivary and sweat glands, as well as in glial cells. Neoplasms derived from these cells also express S-100 protein non-uniformly. A large number of well-differentiated tumors of the salivary gland, adipose and... (more)

Species: Rabbit Monoclonal **Cat#:** Z2670

IHC: Human melanoma stained with ZR379

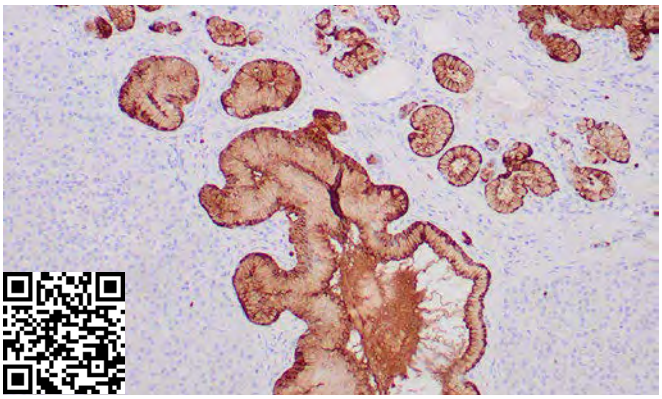


S100P (clone ZR115) IVD

S100P is a 95-amino-acid protein and a member of the S100 family. S100P has been shown to mediate tumor growth, metastasis, and invasion. Overexpression of S100P has been detected in several cancers such as breast, colon, prostate, pancreatic, and lung carcinomas, and the protein has been functionally implicated in carcinogenic processes. S100P could serve as a diagnostic marker, prognostic/predictive indicator, and therapeutic target for different carcinomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2419

IHC: Pancreatic ductal carcinoma stained with ZR115

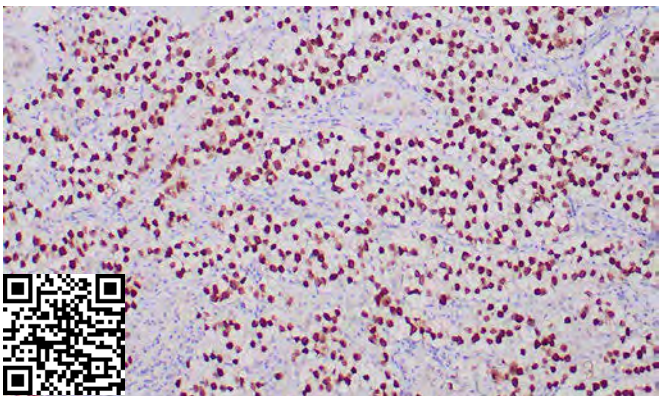


SALL4 (clone ZR276) IVD

Sall3 (SALL3, sal-like 3) and Sall4 (SALL4, sal-like 4) are mammalian homologs of the Drosophila region-specific homeotic gene spalt, which encodes a zinc finger-containing transcription regulator. Drosophila spalt is an essential genetic component required for the specification of the posterior head and anterior tail as opposed to the trunk. Sall3 is expressed at 24 weeks of gestation in several regions of the human fetal brain, including neurons of the hippocampus formation and mediodorsal and ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2726

IHC: Human seminoma stained with ZR276

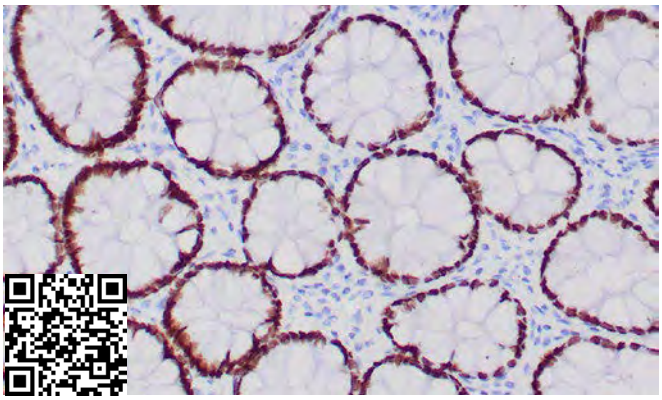


SATB2 (clone ZR167) IVD

SATB2 is a DNA binding protein specifically binds nuclear matrix attachment regions. It is involved in transcription regulation and chromatin remodeling. SATB2 expression in colorectal carcinomas (CRC) is correlated with a good prognosis. In laryngeal squamous cell carcinoma, it functions as a tumor suppressor, wherein loss of expression is positively correlated with high tumor grade and recurrence. Moreover, SATB2, in combination with CK20, could identify almost all CRC's. Upper GI carcinomas... (more)

Species: Rabbit Monoclonal **Cat#:** Z2479

IHC: Human colon stained with ZR167

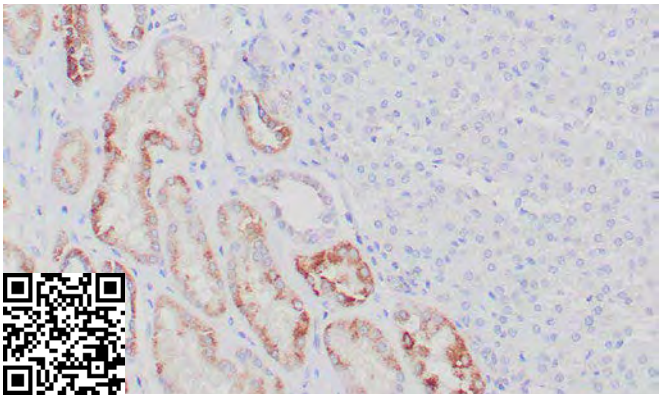


SDHB (clone ZR339) IVD

Succinate dehydrogenase B (SDHB) is a vital component of the citric acid cycle and the electron transport chain, a respiratory complex that catalyzes the oxidation of succinate in the mitochondrial membrane. Many cancers are generally positive for SDHB, including renal cell carcinomas and gastrointestinal stromal tumors. A subset of RCC and GIST tumors associated with SDH mutations, Carney-Stratakis Syndrome or Carney Triad exhibit a loss of SDHB expression.

Species: Rabbit Monoclonal **Cat#:** Z2645

IHC: Human succinate dehydrogenase deficient RCC stained with ZR339

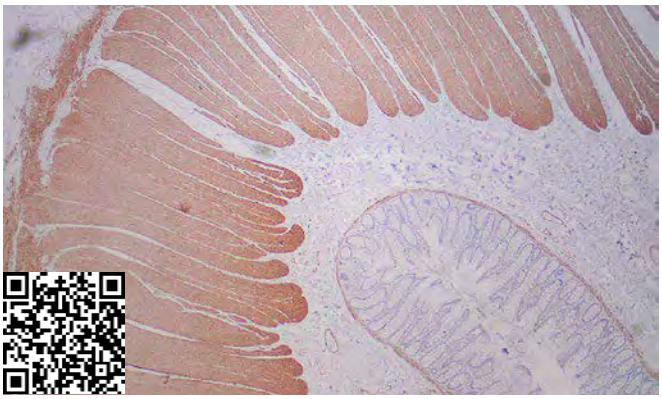


Smoothelin (clone ZR169) IVD

Smoothelin is found exclusively in contractile smooth muscle cells. Strong smoothelin expression is nearly exclusively observed in muscularis propria. Therefore, the staining pattern of MP (strongly positive) and MM (negative or weakly positive) makes this antibody an attractive diagnostic tool. Anti-smoothelin immunostaining can be helpful in differentiating benign (+) from malignant smooth muscle tumors (-) and other mimics (-). (more)

Species: Rabbit Monoclonal **Cat#:** Z2465

IHC: Human colon stained with ZR169

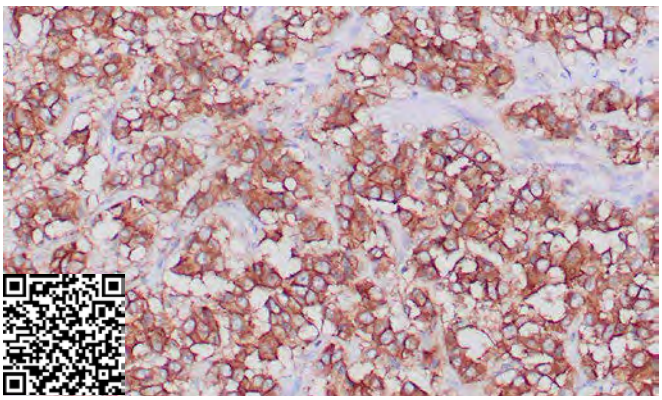


Somatostatin Receptor Type (SSTR2) (clone ZR233) IVD

SSTRs share common signaling pathways including inhibition of adenylyl cyclase via GTP binding proteins. Some of the subtypes are also coupled to tyrosine phosphatase (SSTR1,2), Ca2+ channels (SSTR2), Na+/H+ exchanger (SSTR1), PLA-2 (SSTR4), and MAP kinase (SSTR4). Individual target cells typically express more than one SSTR subtype and often all five isoforms. Subtypes of SSTR can form functional homo- and ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2712

IHC: Human neuroendocrine tumor stained with ZR233

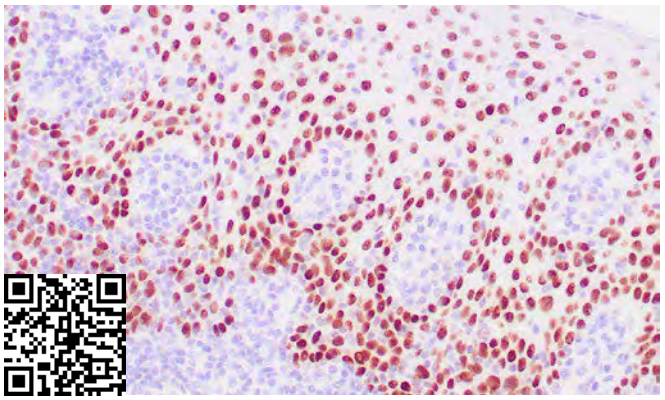


SOX-2 (clone ZM57) IVD

SOX2 is required for stem-cell maintenance in the central nervous system, and also regulates gene expression in the stomach. SOX2 is necessary for regulating multiple transcription factors that affect Oct3/4 expression. An essential function of SOX2 is to stabilize embryonic stem cells in a pluripotent state by maintaining the requisite level of Oct3/4 expression.SOX-2 is expressed in teratoma and CNS astrocytic tumors. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2367

IHC: Human skin stained with ZM57

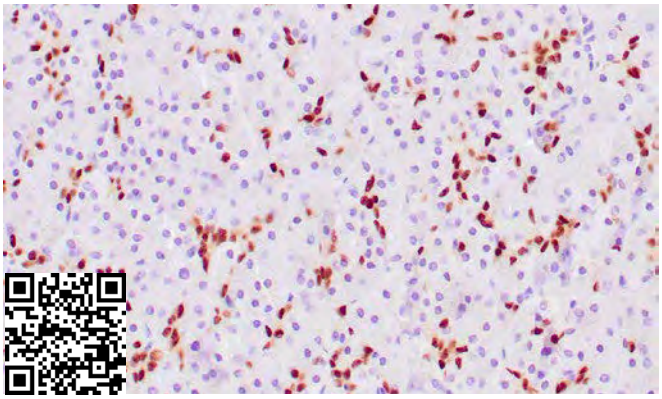


SOX-9 (clone ZM171) IVD

Sox genes encode putative transcriptional regulators implicated in the decision of cell fates during development and the control of diverse developmental processes. SOX9 plays an important role in the normal skeletal development. It may regulate the expression of other genes involved in chondrogenesis by acting as a transcription factor for these genes.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2483

IHC: Human panceas stained with ZM171

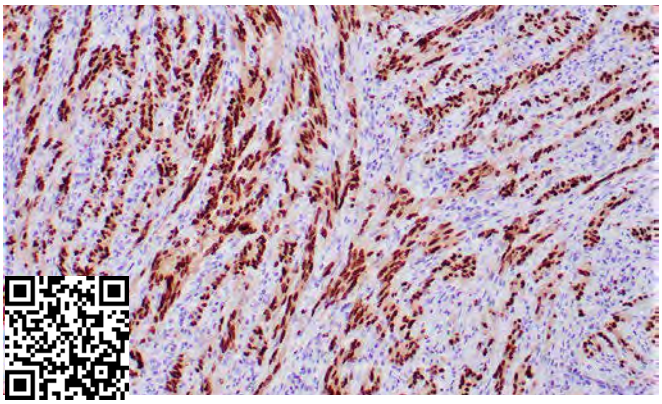


SOX-10 (clone ZR275) IVD

SOX-10, a nuclear transcription factor is a sensitive marker of melanoma. SOX-10 is moderately to strongly positive in desmoplastic or spindle cell melanomas, which is usually negative for HMB-45, Melan-A or even S-100. SOX-10 is diffusely expressed in schwannomas, neurofibromas, sustentacular cells of pheochromocytomas and paragangliomas. SOX-10 reaction is not identified in any other mesenchymal and epithelial tumors except for myoepitheliomas and ... (more)

Species: Monospecific Rabbit Monoclonal **Cat#:** Z2591

IHC: Human malignant melanoma stained with ZR275

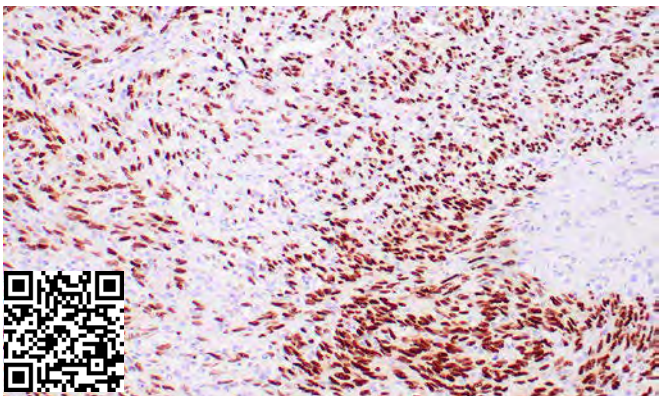


SOX-10 (clone ZM10) IVD

Zeta's mouse monoclonal recombinant antibody recognizes Sry-related HMG-BOX gene 10, (SOX-10), a nuclear transcription factor that participates in neural crest development and in the specification and differentiation of cells of melanocytic lineage, has been recently shown to be a sensitive marker of melanoma. SOX-10 nuclear expression was found in virtually all cases of melanomas (97%) and about half of cases of malignant peripheral nerve sheath tumors (49%) ... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2293

IHC: Human malignant melanoma stained with ZM10

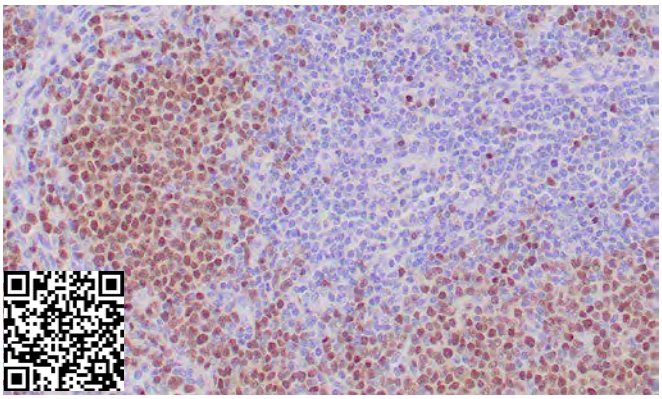


NEW SOX-11 (clone ZR462) IVD; RUO(EU)

SOX-11 is a transcription factor that belongs to the SOX (SRY-related HMG-box) family of proteins. These proteins play a crucial role in regulating gene expression during development and maintaining various tissues' functions in adults. SOX-11 is normally expressed in the developing human central nervous system and plays a role in embryonic cell determination. SOX-11 is aberrantly expressed in various types of cancers. In mantle cell lymphoma (MCL), SOX-11 is often ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2823

IHC: Human mantle cell lymphoma stained with ZR462

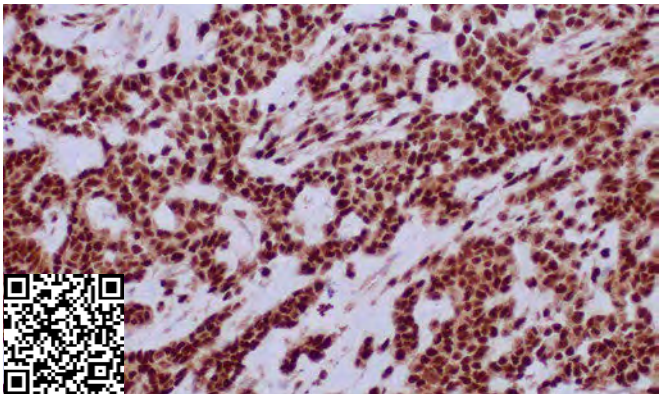


NEW SS18-SSX (clone ZR463) IVD; RUO(EU)

SS18 is a protein that is a part of the SWI/SNF complex. The SS18-SSX (t(X;18)(p11.2;q11.2) fusion proteins are a result of in-frame fusions that fuse the SS18 gene on chromosome 18 with X chromosome genes SSX1, SSX2, and to a lesser extent SSX4. This specific gene fusion is commonly associated with (>90%) synovial sarcoma. The immunohistochemical demonstration of nuclear SS18-SSX fusion expression is diagnostic of synovial sarcoma.

Species: Rabbit Monoclonal **Cat#:** Z2824

IHC: Human solitary fibrous tumor stained with ZR463

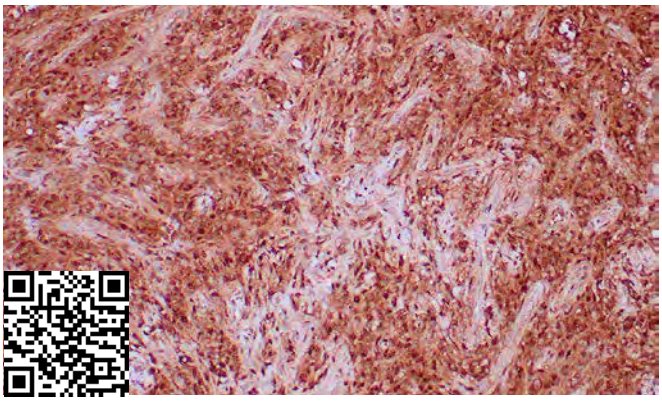


STAT6 (clone ZR289) IVD

STAT6 is a reliable marker to distinguish solitary fibrous tumors from other soft tissue neoplasms. By immunohistochemistry, nuclear STAT6 expression can discriminate solitary fibrous tumors from its morphological mimics in the meninges, including meningioma, glioblastoma, gliosarcoma, hemangioblastoma, schwannoma and hemangioma. Morphological mimics of solitary fibrous tumors were negative, demonstrating 100% specificity. (more)

Species: Rabbit Monoclonal **Cat#:** Z2727

IHC: Human solitary fibrous tumor stained with ZR289

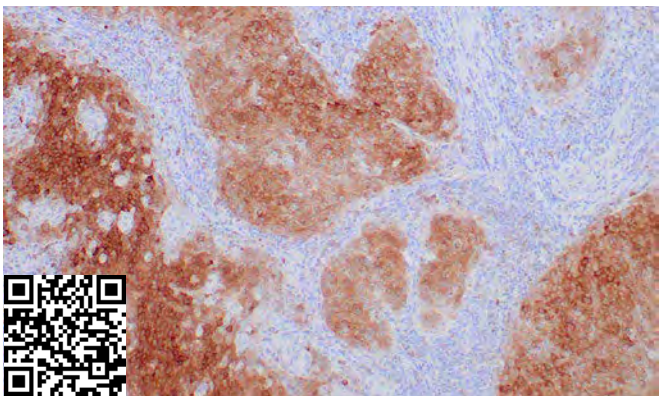


Stathmin (clone ZR398) IVD

Op18 (for oncoprotein 18, also designated stathmin, prosolin or metablastin) is a Tubulin-associated intracellular phosphoprotein. Many different phosphorylated forms of Op18 are observed and expressed as two different isoforms. Op18 is a critical regulator of microtubulin dynamics and is downregulated by p53. It serves as a transducing protein via phophorylation for various cell signaling pathways and is involved in mitosis and differentiation. Op18 is present in many cancers ... (more)

Species: Rabbit Monoclonal **Cat#:** Z2754

IHC: Cervical squamous cell carcinoma stained with ZR398

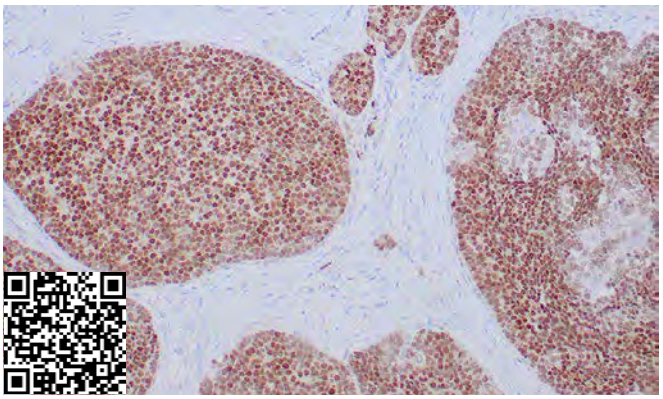


Steroidogenic Factor 1 (clone ZR397) IVD; RUO(EU)

Steroidogenic Factor 1 (SF-1) is an orphan nuclear receptor that belongs to subfamily 5 and is a regulator of steroidogenic enzyme gene expression. Oxysterols are suggested as its ligands. It is expressed in all steroidogenic tissues, including the adrenal cortex, testicular Sertoli cells, and Leydig cells, ovarian theca, hypothalamus, and anterior pituitary. SF-1 plays an important role in adrenal and gonadal development and is highly valuable marker to determine the adrenocortical origin of an adrenal mass.

Species: Rabbit Monoclonal **Cat#:** Z2753

IHC: Human adrenal gland stained with ZR397

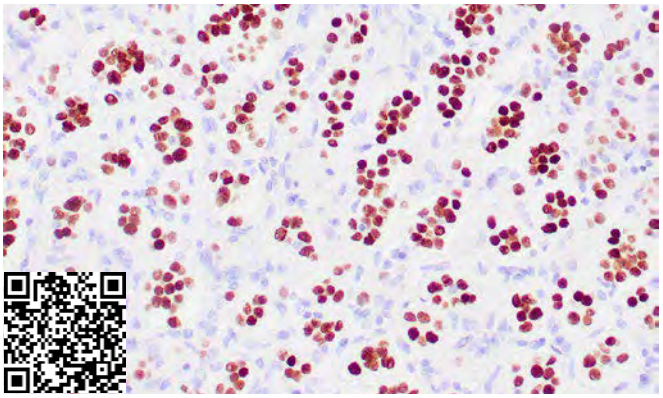


Steroidogenic Factor-1 (clone N1665) IVD

The Steroidogenic Factor 1 (SF-1) protein is a transcription factor involved in sex determination by controlling activity of genes related to the reproductive glands or gonads and adrenal glands. This protein is encoded by the NR5A1 gene, a member of the nuclear receptor subfamily, located on the long arm of chromosome 9 at position 33.3. SF-1 is expressed in the cortex of normal adrenal gland, adrenal cortical adenomas and carcinomas. It is also positive in sex-cord stromal tumors of testicle and ovarian origins.

Species: Mouse Monoclonal **Cat#:** Z2223

IHC: Human adrenal gland stained with N1665

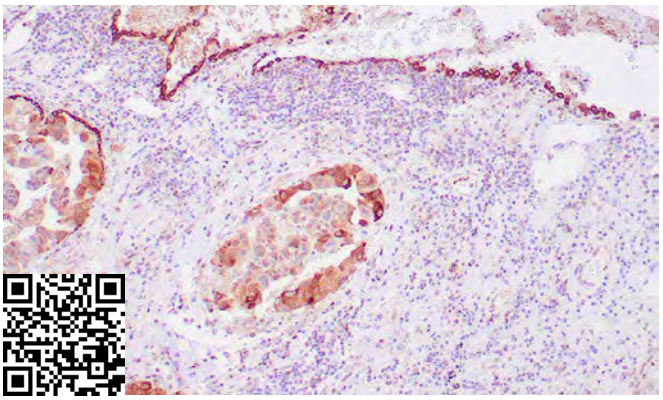


Surfactant (clone ZM124) IVD

Pulmonary surfactant is primarily responsible for lowering the surface tension at the air-liquid interface in the alveoli, a process that is essential for normal respiration. Surfactant-associated proteins (SPs) SP-A and SP-D are large multimeric proteins belonging to the family of Collectins, which contribute to the innate immune system. Both SP-A and SP-D have been shown to protect against microbial challenge through binding to the lipid components of the bacterial cell wall and... (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2428

IHC: Human lung adenocarcinoma stained with ZM124

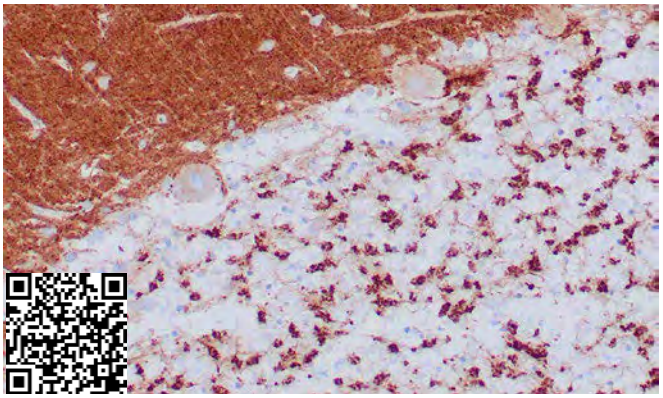


Synaptophysin (clone ZR445) IVD; RUO(EU)

Recombinant rabbit monoclonal antibody recognizes a protein of 38kDa that is identified as synaptophysin. It is an N-glycosylated integral membrane protein found in neurons and endocrine cells. Identifies normal neuroendocrine cells and neuroendocrine neoplasms. Diffuse, finely granular, cytoplasmic staining is observed, which probably correlates with the distribution of the antigen within neurosecretory vesicles. Synaptophysin is an independent, broad-range marker of neural and neuroendocrine differentiation.

Species: Rabbit Monoclonal **Cat#:** Z2801

IHC: Human neuroendocrine tumor stained with ZR445

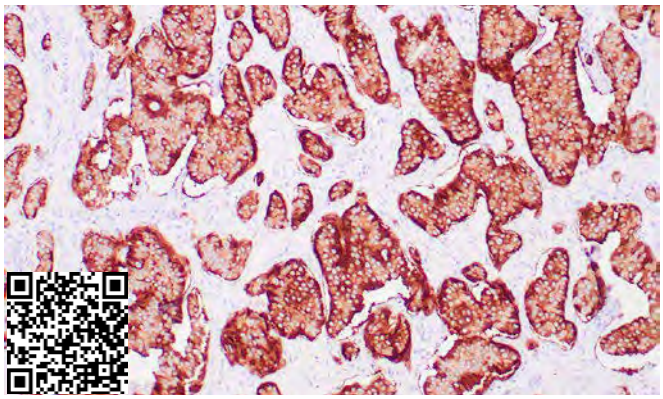


Synaptophysin (clone ZM208) IVD

This antibody labels normal neuroendocrine cells of human adrenal medulla, carotid body, skin, pituitary gland, thyroid, lung, pancreas, gastrointestinal mucosa, Paneth's cells the gastrointestinal tract and of gastric parietal cells. Neurons in the brain, spinal cord, and retina are labeled. In combination with anti-chromogranin and anti-NSE, Ab to synaptophysin is very useful the identification of normal neuroendocrine cells neuroendocrine neoplasms.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2544

IHC: Human neuroendocrine tumor stained with ZM208

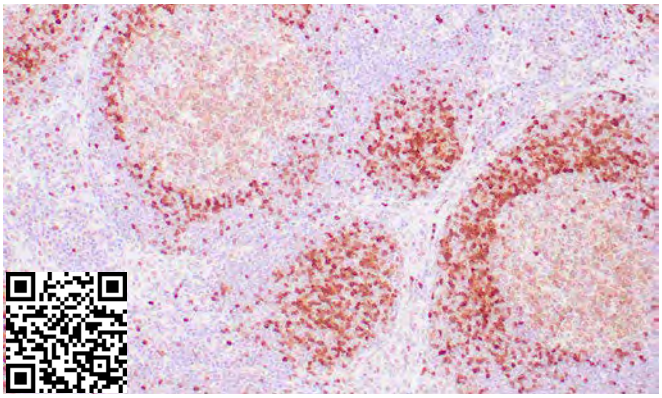


TCL1 (clone ZM92) IVD

T-cell leukemia/Lymphoma Protein 1A (TCL-1A), also known as p14TCL1 is a product of the TCL1 gene that is involved in T-cell prolymphocytic leukemia (TPLL). T-PLL is a rare form of mature T-cell leukemia, which is consistently associated with chromosomal rearrangements characterized by the juxtaposition of the TCRA locus on chromosome 14q11 and the TCL1A gene on 14q32.13. TCL1 is overexpressed in Burkitt lymphoma, the majority of AIDS-related non-Hodgkin lymphoma-designated... (more)

Species: Mouse Monoclonal **Cat#:** Z2402

IHC: Human tonsil stained with ZM92

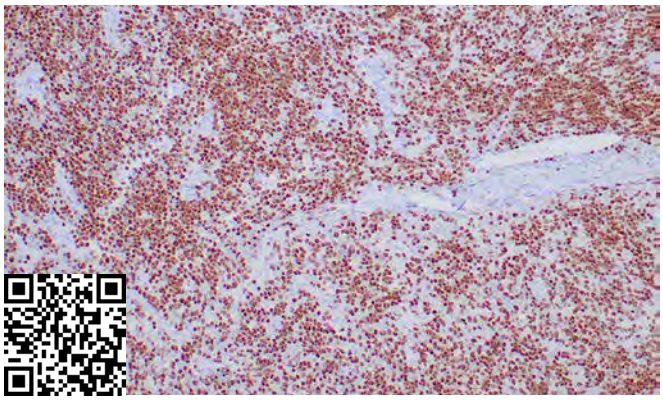


TdT (clone ZR446) IVD; RUO(EU)

Terminal deoxynucleotidyl transferase (TdT) is an unusual deoxynucleotide polymerizing enzyme with a molecular weight of about 58 kDa found normally only in B- and T-cell lymphoblasts/prelymphocytes. TdT generates antigen receptor diversity by synthesizing non-germ line elements (N-regions) at the junctions of rearranged Ig heavy chain and T cell receptor gene segments. Rare TdT-positive cells are regularly detected in the thymus and bone marrow. Typically, TdT expression in the thymus is very ... (more).

Species: Rabbit Monoclonal **Cat#:** Z2802

IHC: Human type B1 thymoma stained with ZR446

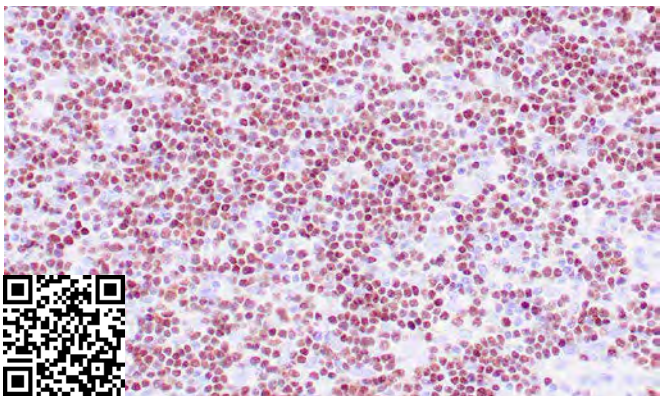


TdT (clone ZM51) IVD

Terminal Deoxynucleotidyl Transferase (TdT, a DNA polymerase) is considered to be a highly specific marker for the diagnosis and classification of acute lymphoblastic lymphoma/leukemias. The determination of TdT expression is most valuable when it is different to differentiate histologically between lymphoblastic lymphoma and Burkitt's lymphoma.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2391

IHC: Human type B1 thymoma stained with ZM51

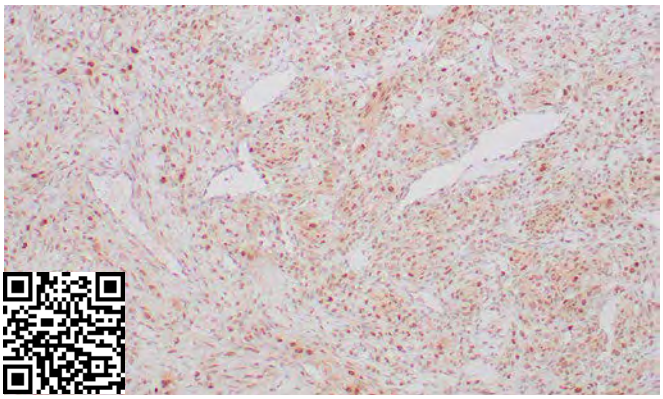


TFE3 (clone ZR365) IVD

Transcription factor E3 (TFE3) belongs to the basic helix-loop-helix zipper transcription factor family. The TFE3 gene is expressed in various cells of the human body, and participates in the regulation of various genes. The rearrangement of this gene is associated with a variety of tumors, and it is highly expressed in acinar soft tissue sarcoma with TFE3 fusion gene, Xp11.2 translocation/TFE3 gene fusion-related renal cell carcinoma, and in perivascular epithelioid cell tumors.

Species: Rabbit Monoclonal **Cat#:** Z2605

IHC: Ovarian sclerosing stromal tumor stained with ZR365

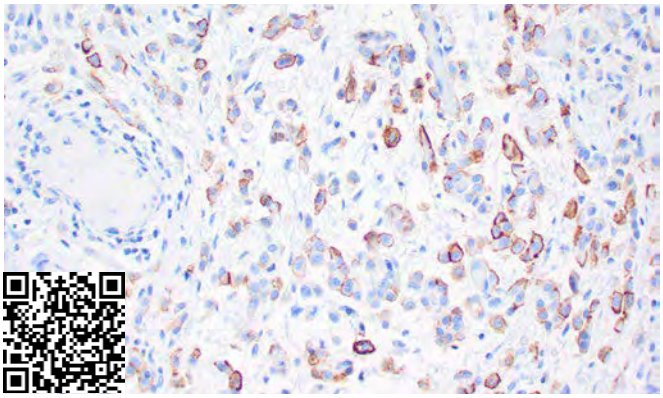


Thrombomodulin/CD141 (clone ZM105) IVD

Thrombomodulin is present in almost all benign vascular tumors and majority of malignant vascular tumors (Kaposi's sarcoma, angiosarcoma, and epithelioid hemangioendothelioma). Anti-thrombomodulin serves as a sensitive marker for lymphatic endothelial cells and their tumors. Recently, thrombomodulin antibody has been used for mesothelial cells and malignant mesotheliomas. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2416

IHC: Human urothelial carcinoma stained with ZM105

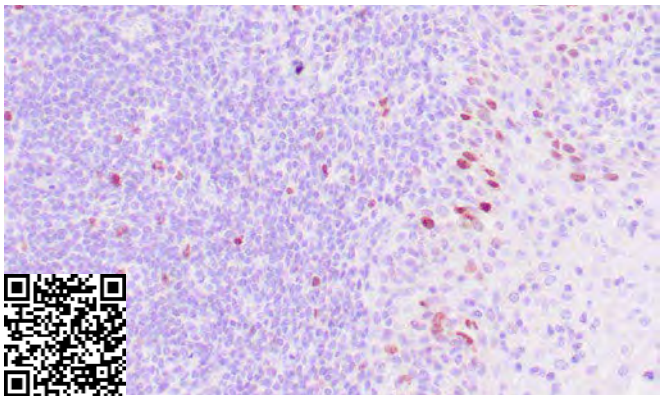


Thymidylate Synthase (TS) (clone TS106) IVD

TS is primarily active in proliferating and metabolic active cells. TS is inactivated by a covalent complex formation with 5-FdUMP and methylenetetrahydrofolate. Literature indicates that expression of TS is associated with response to 5-fluorouracil (5-FU) in human breast, colorectal, gastric, head, and neck carcinomas with low TS expression predicting better response to 5-FU and survival. (more)

Species: Mouse Monoclonal **Cat#:** Z2199

IHC: Human colon carcinoma stained with TS106

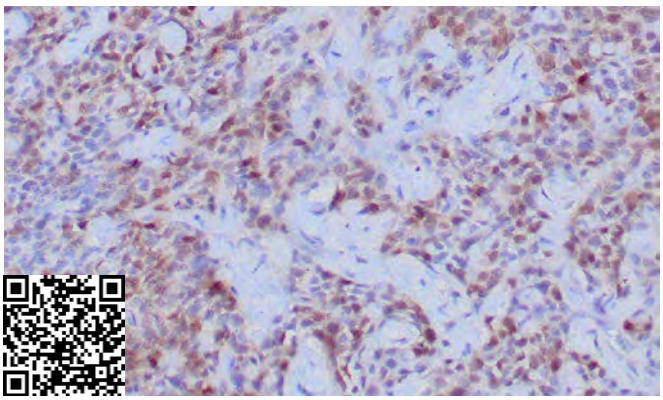


Thymidylate Synthase (clone ZR245) IVD

Thymidylate Synthase (TS) is a critical target for fluoropyrimidines, an essential antineoplastic drug widely used to treat solid tumors. Both 5-FU and fluorodeoxyuridine are converted in tumor cells to FdUMP, which inactivates TS by forming a ternary covalent complex in the presence of the folate cofactor 5,10-methylenetetrahydrofolate. Expression of TS protein has been reported to associate with response to 5-fluorouracil (5-FU) in human colorectal, gastric, head and neck, and breast carcinomas. (more)

Species: Rabbit Monoclonal **Cat#:** Z2719

IHC: Human urothelial carcinoma stained with ZR245

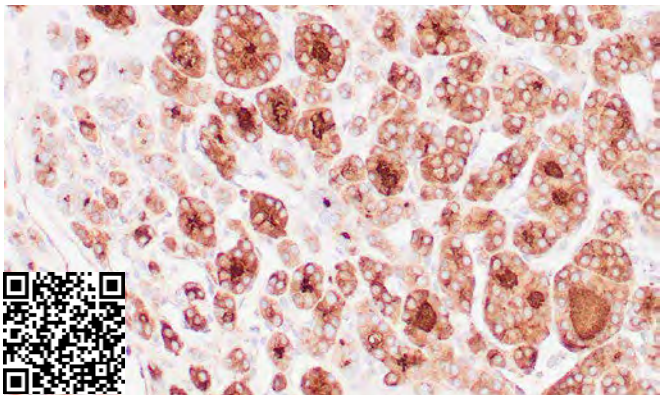


Thyroglobulin (clone 2H11+6E1) IVD

Antibody to thyroglobulin has been shown to be useful in positive identification of thyroid carcinomas of the papillary and follicular types. Demonstration of thyroglobulin in a metastatic lesion establishes the thyroid origin of the tumor. Adenocarcinomas of non-thyroidal origin are not reactive. Clone 2H11+6E1 cocktail is especially designed for sensitive detection of thyroglobulin. It stains thyroglobulin in follicular epithelial cells as well as colloid tissue.

Species: Mouse Monoclonal **Cat#:** Z2062

IHC: Human thyroid gland stained with 2H11+6E1

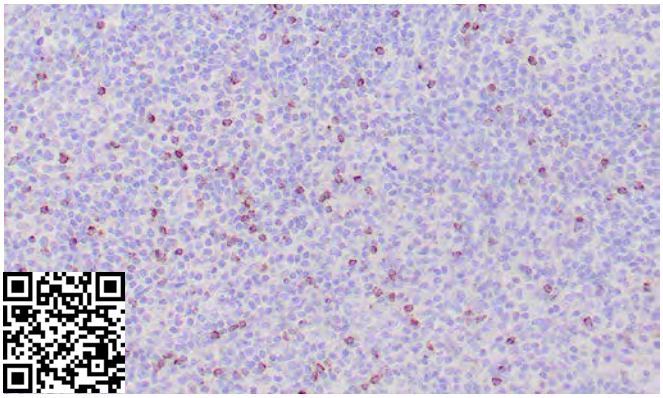


TIA-1 (clone ZR284) IVD

This antibody also reacts with CD4+ activated T-cell clones, activated NK cell clones, and Con activated thymocytes, but not with B lymphocytes or B-cell lines. The T cell intracellular antigen 1 (TIA-1) is a 17-kDa cytoplasmic granule associated protein also designated as GMP-17. The GMP-17/TIA-1 molecule is expressed in cells possessing cytolytic potential and could be involved in the signaling cascade of Fas (CD95)-mediated apoptosis. Within hematopoietic cell lines, the 2G9 monoclonal antibody... (more)

Species: Rabbit Monoclonal **Cat#:** Z2599

IHC: Human nasal T/NK cell lymphoma stained with ZR284

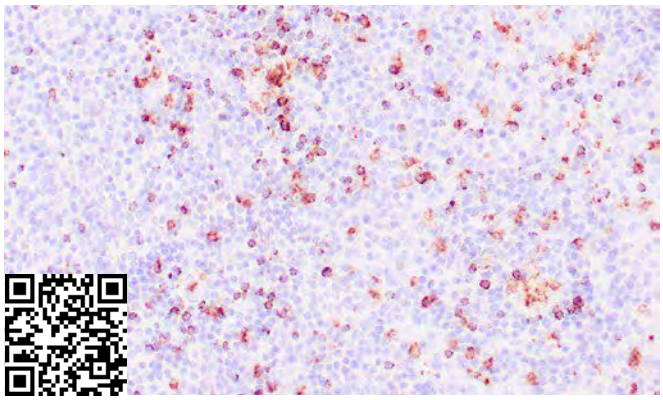


TIA-1 (clone 2G9A10F5) IVD

Also reacts with CD4+ activated T-cell clones, activated NK cell clones, and Con activated thymocytes, but not with B lymphocytes or B-cell lines. The T cell intracellular antigen 1 (TIA-1) is a 17-kDa cytoplasmic granule associated protein also designated as GMP-17. The GMP-17/TIA-1 molecule is expressed in cells possessing cytolytic potential and could be involved in the signaling cascade of Fas (CD95)-mediated apoptosis. Within hematopoietic cell lines, the 2G9 monoclonal antibody... (more)

Species: Mouse Monoclonal **Cat#:** Z2183

IHC: Nasal T/NK cell lymphoma stained with 2G9A10F5

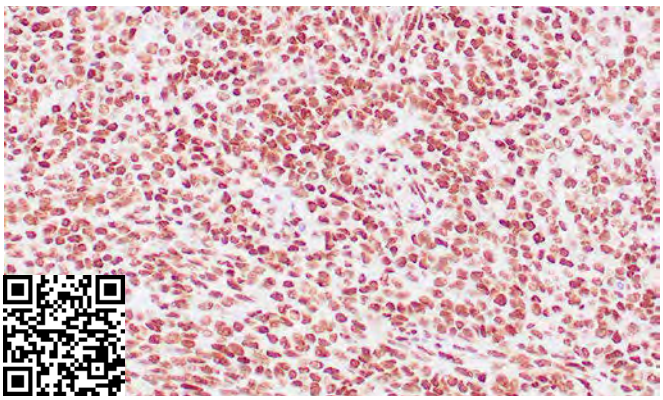


TLE1 (clone ZM93) IVD

Transducin-like enhancer protein 1 (TLE1) is a protein that is encoded by the TLE1 gene and is involved in control of hematopoiesis, neuronal, and terminal epithelial differentiation. Positive immunohistochemical nuclear staining with anti-TLE-1 has been shown to be a useful addition to an IHC panel when differentiating synovial sarcoma from other soft tissue malignancies.

Species: Mouse Monoclonal **Cat#:** Z2403

IHC: Human synovial sarcoma stained with ZM93

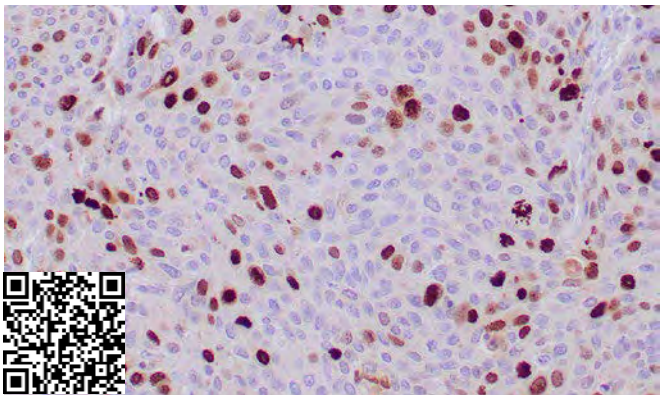


Topoisomerase II alpha (clone ZR94) RUO

The topoisomerase II alpha isoform is a 170kDa nuclear protein and plays an important role in DNA synthesis and RNA transcription, as well as chromosomal segregation during mitosis. Topoisomerase II alpha is a sensitive and specific marker of late S-, G2- & M-phases in transformed and developmentally regulated normal cells and has been shown to be over-expressed in many human cancers. Decreased expression of Topoisomerase II alpha is the predominant mechanism of resistance to several chemotherapeutic agents.

Species: Rabbit Monoclonal **Cat#:** Z2404

IHC: Squamous cell carcinoma stained stained with ZR94

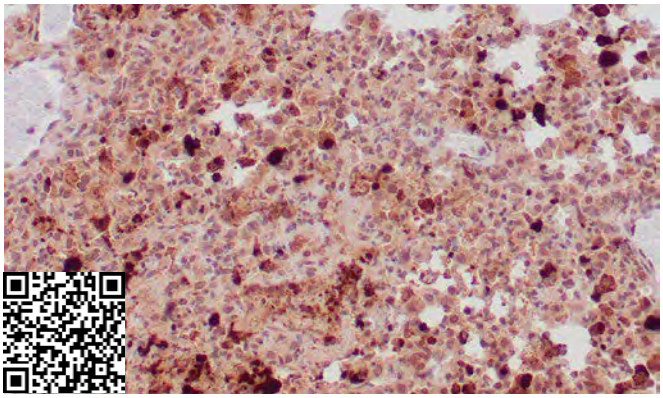


Toxoplasma gondii (polyclonal) ASR/IVD

The life cycle of ***Toxoplasma gondii*** includes two phases: the intestinal (or enteroepithelial) and extraintestinal phases. The intestinal phase produces oocysts and occurs only in wild and domesticated cats. The extra-intestinal phase occurs in all infected animals and produces tachyzoites (actively proliferating trophozoites) and, eventually, bradyzoites (slowly growing trophozoites) or zoitocysts. ***Toxoplasma gondii*** infects tissue of... (more)

Species: Rabbit Polyclonal **Cat#:** Z2556

IHC: Toxoplasma gondii-infected lung stained with polyclonal anti-*T. gondii*

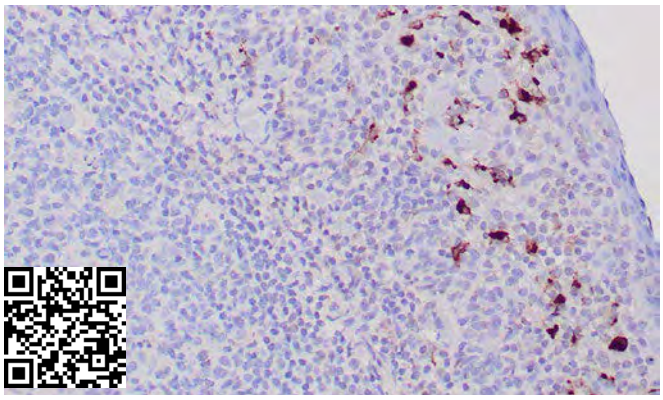


TRAcP (clone ZR234) IVD

Recognizes tartrate-resistant acid phosphatase (35kDa) (TRAcP). It exists as two isoforms (5a and 5b). Reacts with both the isoforms. Serum TRAcP 5b is produced from osteoclasts and elevated during bone resorption. TRAcP is an iron containing glycoprotein, which catalyzes the conversion of orthophosphoric monoester to alcohol and orthophosphate. It is the most basic of the acid phosphatases and is the only form not inhibited by L(+)-tartrate. Expression of TRAcP is increased in certain pathological conditions such as... (more)

Species: Rabbit Monoclonal **Cat#:** Z2714

IHC: Human tonsil stained with ZR234

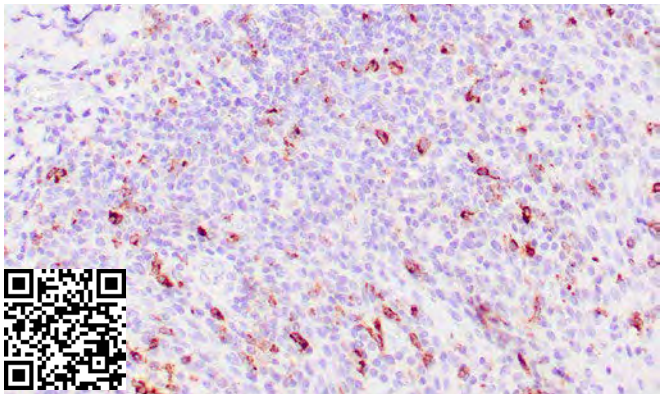


TRAcP (clone ZM174) IVD

TRAcP exists as two isoforms (5a and 5b) and ZM174 reacts with both. Expression of TRAcP is increased in certain pathological conditions such as Leukemic Reticuloendotheliosis (Hairy Cell Leukemia), Gaucher's Disease, HIV-induced Encephalopathy, Osteoclastoma and in osteoporosis and metabolic bone diseases. Anti-TRAcP antibody labels the cells of Hairy Cell Leukemia (HCL) with a high degree of sensitivity and specificity. Other cells stained with this antibody are tissue macrophages and osteoclasts. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2486

IHC: Spleen involved by hairy cell leukemia stained with ZM174

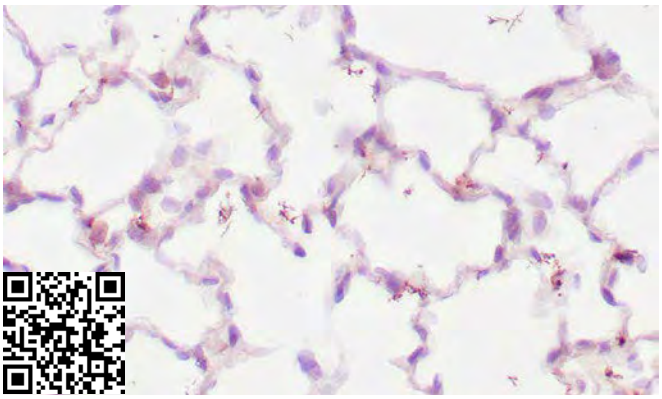


Treponema pallidum (polyclonal) ASR/IVD

There are at least five subspecies of Treponema pallidum, including T. pallidum pallidum (the cause of syphilis), T. pallidum pertenue (the cause of yaws), T. pallidum carateum (the cause of pinta), T. pallidum triroclium (the cause of syphilis and pinta) and T. pallidum endemicum (the cause of bejel). T. pallidum is generally transmitted through close sexual contact, entering the host via breaches in squamous or columnar epithelium.

Species: Rabbit Polyclonal **Cat#:** Z2554

IHC: Human lung infected with treponema organisms stained with polyclonal anti-T. pallidum

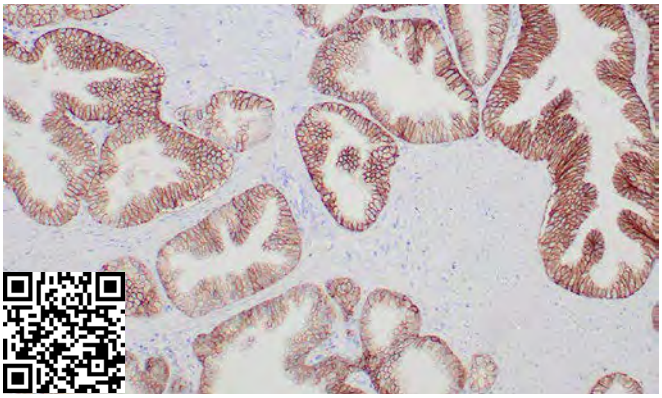


TROP2 (clone ZR388) IVD

TROP2/TACSTD2 is a cell surface glycoprotein receptor and single-pass type I membrane protein containing one thyroglobulin type-1 domain, an epidermal growth factor-like repeat, a phosphatidylinositol binding site, and tyrosine phosphorylation sites near the C-terminus. It plays a role in transducing intracellular calcium signals. It is expressed in trophoblast cells, cornea, and multi-stratified epithelia. It is also highly expressed in several types of tumors and is involved in regulating the growth of carcinoma cells.

Species: Rabbit Monoclonal **Cat#:** Z2744

IHC: Human colon carcinoma stained with ZR388

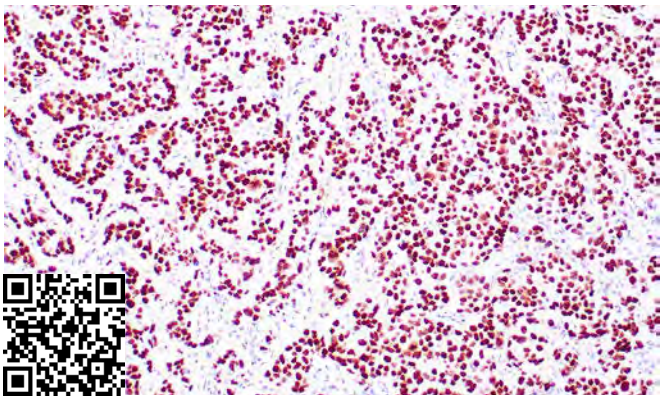


TRPS1 (clone ZR382) IVD

TRPS1 (Tricho-Rhino-phalangeal Syndrome Type 1) has been found to be a highly specific and sensitive marker for all types of breast carcinomas, especially TNBC (triple-negative breast cancer). TRPS1 was identified to be a novel GATA transcriptional factor, functioning as an essential regulator for growth and differentiation of normal mammary epithelial cells and possibly involved in the development of breast cancer. A recent study showed that TRPS1, which is highly expressed in triple-negative... (more)

Species: Rabbit Monoclonal **Cat#:** Z2673

IHC: Human breast carcinoma stained with ZR382

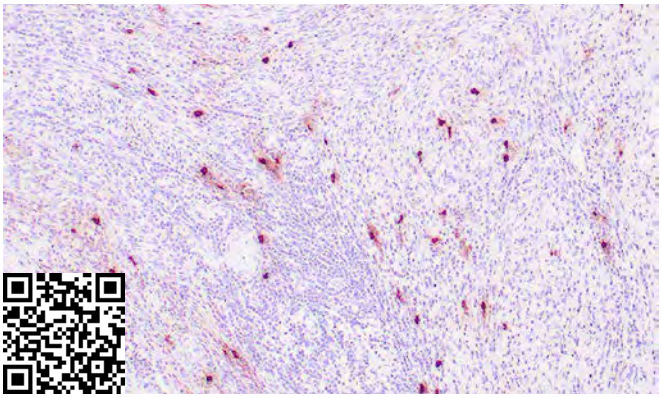


Tryptase (clone ZM96) IVD

This antibody reacts with mast cells distributed in skin, synovium, lung, and heart. This antibody does not bind with any other cell type. Human mast cell tryptase is considered to be an important marker of mast cell activation and is an important mediator of inflammation. Mastocytosis is a term collectively used for a group of disorders in which there is abnormal accumulation of mast cells in one or multiple organs. Anti-tryptase, combined with anti-CD2, anti-CD25, and anti-CD117, can be... (more).

Species: Monospecific Mouse Monoclonal **Cat#:** Z2406

IHC: Human tonsil stained with ZM96

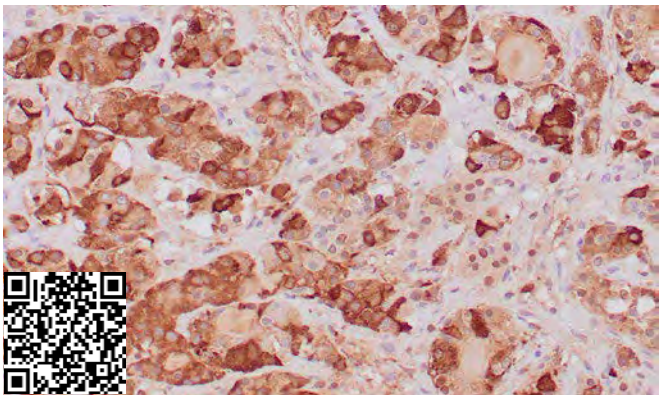


TSH (clone ZM294) IVD

Thyroid Stimulating Hormone is synthesized and secreted by thyrotrope cells in the anterior pituitary gland which regulates the endocrine function of the thyroid gland. Somatostatin is also produced by the hypothalamus and has an opposite effect on the pituitary production of TSH, decreasing or inhibiting its release. TSH is a useful marker in classification of pituitary tumors and the study of pituitary disease. (more)

Species: Mouse Monoclonal **Cat#:** Z2608

IHC: Human pituitary adenoma stained with ZM294

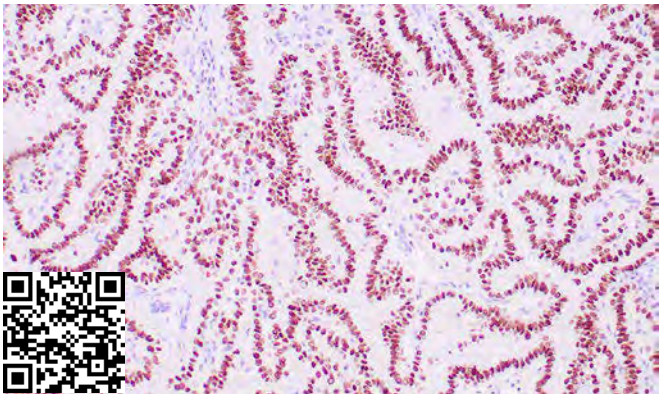


TTF-1 (clone 8G7G3/1) IVD

Thyroid transcription factor-1 is expressed in epithelial cells of the thyroid gland and the lung. Nuclei from liver, stomach, pancreas, small intestine, colon, kidney, breast, skin, testes, pituitary, prostate, and adrenal glands are unreactive. TTF-1 is detected in primary lung adenocarcinomas and small cell carcinomas and is absent in colon and breast carcinomas. Staining with TTF-1 antibody is useful for distinguishing between tumors of lung and non-lung origin.

Species: Mouse Monoclonal **Cat#:** Z2069

IHC: Human lung adenocarcinoma stained with 8G7G3/1

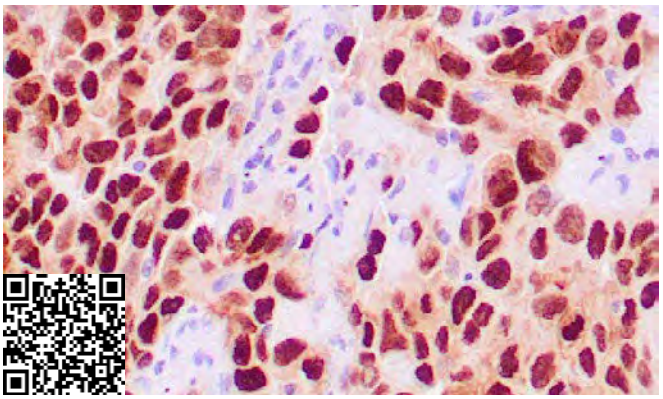


TTF-1/NKX2.1 (clone ZR176) IVD

TTF-1 is a member of the NKx2 family of homeodomain transcription factors. It is expressed in epithelial cells of the thyroid gland and the lung. Anti-TTF-1 is useful in differentiating primary adenocarcinoma of the lung from metastatic carcinomas originating in the breast, mediastinal germ cell tumors, and malignant mesothelioma. It can also be used to differentiate small cell lung carcinoma from lymphoid infiltrates. TTF-1 reactivity is also seen in thyroid malignancies. (more)

Species: Rabbit Monoclonal **Cat#:** Z2370

IHC: Human lung adenocarcinoma stained with ZR176

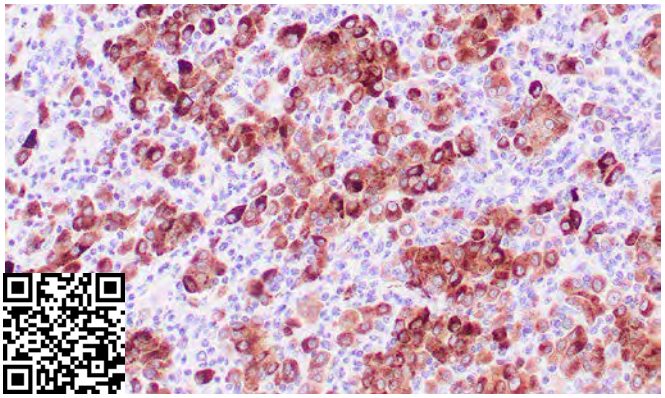


Tyrosinase (clone T311) IVD

Tyrosinase is one of the targets for cytotoxic T-cell recognition in melanoma patients. Clone T311 shows no cross-reaction with MAGE-1 and tyrosinase-related protein 1, TRP-1/gp75.1 Staining of melanomas with clone T311 showed tyrosinase in melanotic as well as amelanotic variants.1 Ab-1 is a useful marker for melanocytes and melanomas. Occasionally a minor band at 55kDa is also detected in Western Blotting. (more)

Species: Mouse Monoclonal **Cat#:** Z2074

IHC: Human melanoma stained with T311

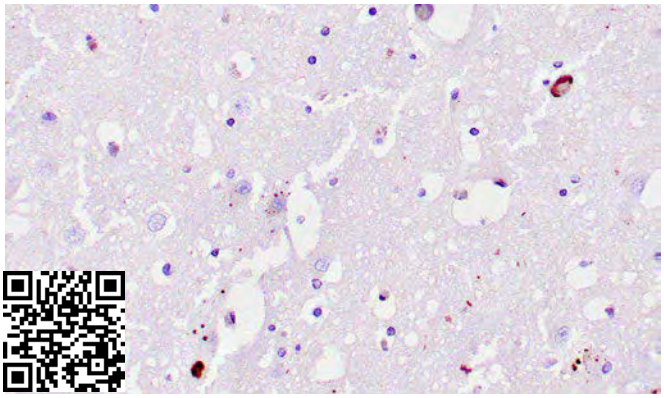


Ubiquitin (clone ZM191) IVD

Ubiquitin is highly conserved and plays an essential role in the ubiquitin-proteasome pathway. IkB, p53, cdc25A, Bcl-2 etc. are shown as targets of ubiquitin-proteasome process as part of regulation of cell cycle progression, differentiation, cell stress response, and apoptosis. Ubiquitin binds with pathological inclusions which are resistant to degradation e.g. neurofibrillary tangles/paired helical filaments in Alzheimer's disease, Lewy bodies seen in Parkinson's disease, and Pick bodies found in Pick's disease etc. (more)

Species: Monospecific Mouse Monoclonal **Cat#:** Z2504

IHC: Human brain hippocampus stained with ZM191

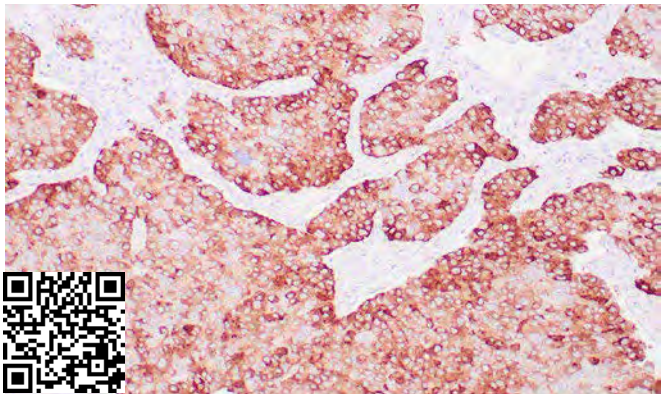


Uroplakin (clone ZM204) IVD

The protein encoded by this gene is a member of the transmembrane 4 superfamily, also known as the tetraspanin family. It may play a role in normal bladder epithelial physiology, possibly in regulating membrane permeability of superficial umbrella cells or in stabilizing the apical membrane through AUM/cytoskeletal interactions. The protein may also play a role in tumor suppression. (more)

Species: Mouse Monoclonal **Cat#:** Z2522

IHC: Human bladder urothelial carcinoma stained with ZM204

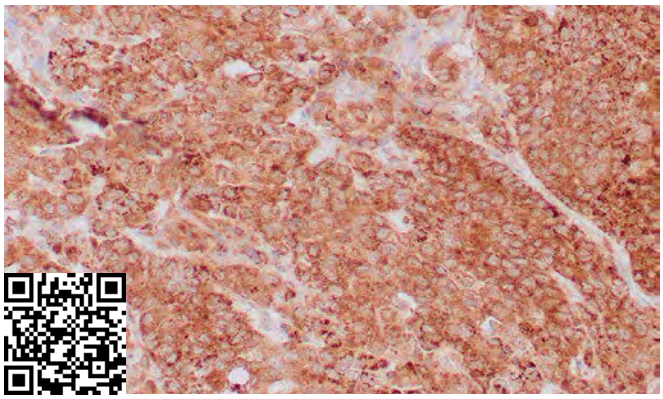


VEGF (clone ZR389) IVD

This MAb recognizes proteins of 19-22kDa (reducing) and 38kDa-44kDa (non-reducing), identified as various isoforms of Vascular Endothelial Growth Factor or Vascular Permeability Factor (VEGF/VPF). It is highly specific to VEGF, which is a homodimeric, disulfide-linked glycoprotein with close homology to platelet-derived growth factor (PDGF). VEGF/VPF plays an important role in angiogenesis, which promotes tumor progression and metastasis. (more)

Species: Rabbit Monoclonal **Cat#:** Z2745

IHC: Human breast carcinoma stained with ZR389

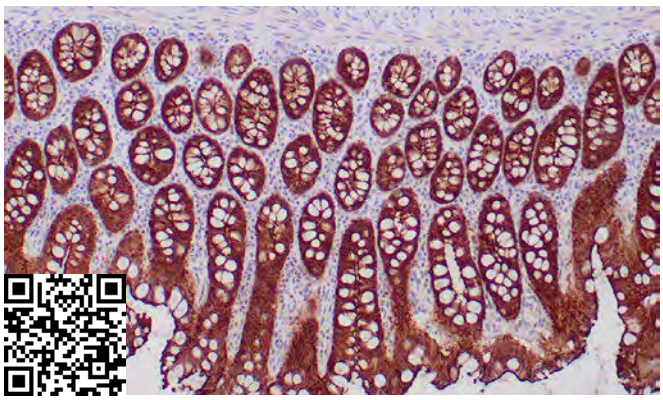


Villin (clone ZR155) IVD; RUO(EU)

Anti-Villin labels the brush border area in the gastrointestinal mucosal epithelium and urogenital tract. Among neoplasms, villin is predominantly expressed in tumors of colorectal origin. Antibody to villin is useful in identifying malignant cells from primary and metastatic colorectal carcinomas. This antibody also labels Merkel cells of the skin.

Species: Rabbit Monoclonal **Cat#:** Z2491

IHC: Human colon stained with ZR155

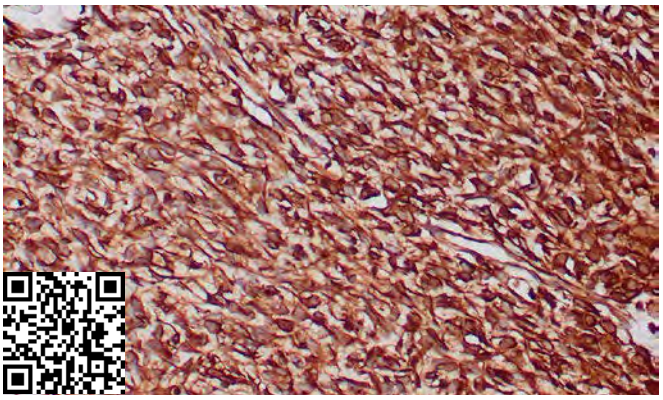


Vimentin (clone ZR381) IVD

Anti-vimentin alone is of limited value as a diagnostic tool; however, when used in panels with other antibodies, it is helpful for the sub-classification of a given tumor. Expression of vimentin, when used in conjunction with anti-keratin, is useful when distinguishing melanomas from undifferentiated carcinomas and large cell lymphomas. All melanomas and Schwannomas react strongly with anti-vimentin. It labels various mesenchymal cells, including melanocytes, lymphocytes, endothelial cells... (more)

Species: Rabbit Monoclonal **Cat#:** Z2672

IHC: Gastrointestinal stromal tumor stained with ZR381

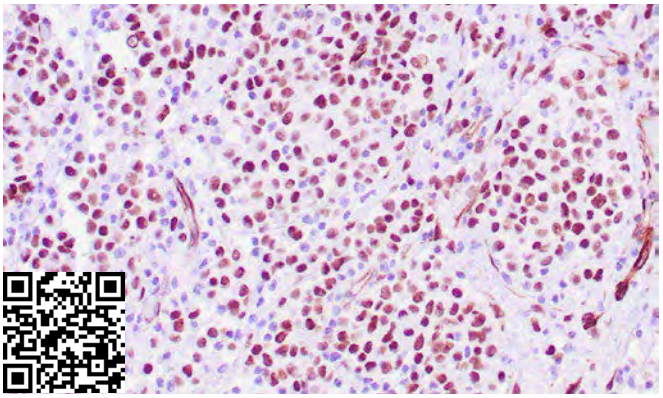


WT-1 (clone 6F-H2) IVD

WT1 is a suppressor gene located on chromosome 11p13. Wilm's Tumor Protein (WT1) has been identified in proliferative mesothelial cells, malignant mesothelioma, ovarian cystadenocarcinoma, gonadoblastoma, nephroblastoma and desmoplastic small round cell tumor. Lung adenocarcinomas rarely stain positive with this antibody.

Species: Mouse Monoclonal **Cat#:** Z2124

IHC: Human ovarian adenocarcinoma stained with 6F-H2

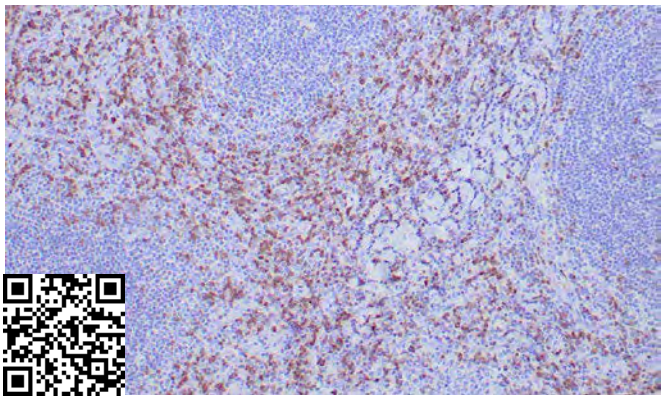


ZAP-70 (clone ZR410) IVD; RUO(EU)

ZAP-70 protein is expressed in leukemic cells of approximately 25% of Chronic Lymphocytic Leukemia (CLL) cases as well. ZAP-70 expression is an excellent surrogate marker for the distinction between the Ig-mutated (ZAP-70 negative) and Ig-unmutated (ZAP-70 positive) CLL subtypes and can identify patient groups with divergent clinical courses. ZAP-70 positive Ig-unmutated CLL cases have a poorer prognosis. (more)

Species: Rabbit Monoclonal **Cat#:** Z2766

IHC: Human tonsil stained with ZR410

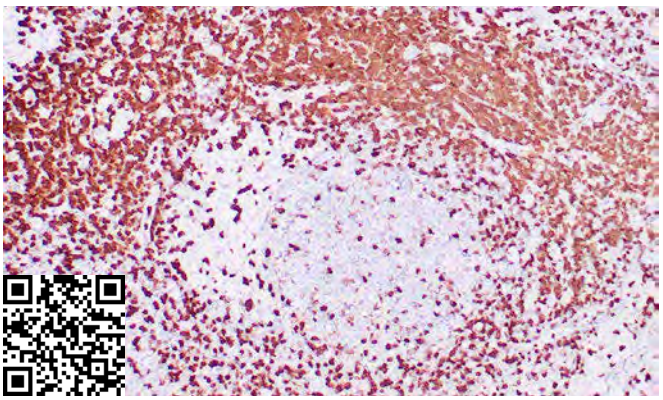


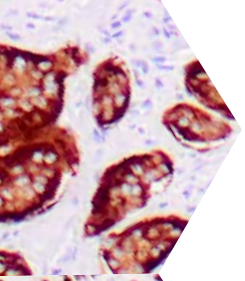
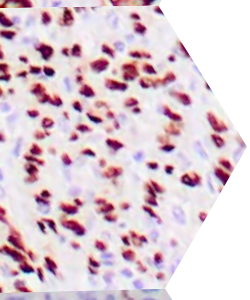
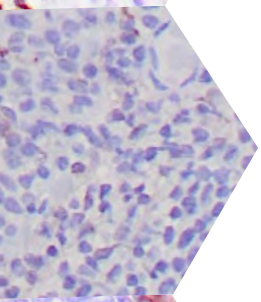
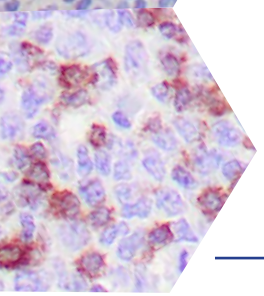
ZAP-70 (clone ZM97) IVD

ZAP70 protein is expressed in leukemic cells of approximately 25% of chronic lymphocytic leukemia (CLL) cases as well. Anti-ZAP70 expression is an excellent surrogate marker for the distinction between the Ig-mutated (anti-ZAP70 negative) and Ig-unmutated (anti-ZAP70 positive) CLL subtypes and can identify patient groups with divergent clinical courses. The anti-ZAP70 positive Ig-unmutated CLL cases have been shown to have a poorer prognosis.

Species: Monospecific Mouse Monoclonal **Cat#:** Z2407

IHC: Human tonsil stained with ZM97



Detection Kits and Reagents
for FFPE Immunocytochemistry

Zeta Corporation offers polymer-based detection to reduce non-specific staining and increase the signal-to-noise ratio of the immunohistochemistry application (IHC). Many of the human organs contain endogenous biotin that might interfere with the actual staining for IHC and require additional blocking steps. With the advent of polymer detection technology, the biotin was completely removed from the detection chemistry and thus reducing the "background" noise. However, the size of the polymer molecule also introduced the steric hindrance. Therefore, Zeta made sure that our detection polymers are small in size to avoid steric hindrance and help increase the sensitivity and specificity of the detection process.

We've developed two different detection chemistries to fit every laboratory need. They are both universal detection chemistries, meaning they can detect both mouse and rabbit primary antibodies on human tissue specimens. To offer more sensitive detection for some of the low-expressing nuclear primary antibodies, Zeta introduced the Zeta MAX detection kits with an amplification step specifically targeting mouse primary antibodies.

Zeta Universal HRP Polymer Detection

A primary antibody specific to an antigen on a formalin-fixed paraffin-embedded (FFPE) tissue section is detected by the Zeta Universal HRP Polymer Detection Kit. The antigen sites are then visualized with DAB chromogen/substrate. This kit is a one-step system using a direct method resulting in a polymer-secondary antibodies-HRP complex that universally detects mouse and rabbit primary antibodies. The resulting chromogenic reaction can be visualized by HRP-compatible chromogens using light microscopy.

Polymer-based detection reduces non-specific staining and increases the signal-to-noise ratio of immunohistochemistry. Many human organs contain endogenous biotin that might interfere with the actual staining for IHC and require additional blocking steps. With polymer detection technology, biotin is completely removed from the detection chemistry thereby reducing the "background" noise. Zeta ensured that our detection polymers are small in size to avoid steric hindrance and help increase the sensitivity and specificity of the detection process.

Zeta Max

The Zeta Max HRP Polymer Detection Kit uses an amplifying reagent (Zeta Max Amplifier) in conjunction with Zeta HRP Polymer (anti-mouse HRP/anti-rabbit HRP) to increase the signal intensity of primary antibodies. The mouse primary antibody specific to an antigen on the formalin-fixed paraffin-embedded (FFPE) tissue section is detected by the Zeta Max Amplifier. The Amplifier reagent is then detected by Zeta HRP Polymer. The Zeta HRP Polymer and the Zeta Max Amplifier reagents are ready-to-use and provided in convenient dropper bottles.

Zeta MAX utilizes unique technology to amplify mouse primary antibodies and particularly antibodies expressed in the nucleus. Zeta MAX reagent penetrates the tissues to tag the primary antibody sites to amplify and generate a multitude of sites for the micro-HRP polymer to bind.

Product details and ordering information, page 115 →

Zeta Max Polymer Detection

Zeta MAX Kit (with DAB) Cat#: ZD15

Specifications

Species Reactivity:	Humans; others not tested.
Applications:	Immunohistochemistry (FFPE tissues)
Storage:	Store at 2˚C to 8˚C
Reagents:	Zeta HRP Polymer (anti-mouse HRP/ anti-rabbit HRP) (ready-to-use) (100 ml) Zeta Max Amplifier reagent (100 ml) DAB Chromogen Concentrate (6.25 ml) DAB Substrate Buffer (118.75 ml)

Zeta MAX Kit (without DAB) Cat#: ZD14

Specifications

Species Reactivity:	Humans; others not tested.
Applications:	Immunohistochemistry (FFPE tissues)
Storage:	Store at 2˚C to 8˚C
Reagents:	Zeta HRP Polymer (anti-mouse HRP/ anti-rabbit HRP) (ready-to-use) (100 ml) Zeta Max Amplifier reagent (100 ml)

Zeta Universal HRP Polymer Detection

Zeta Universal HRP Polymer Detection Kit (with DAB) Cat#: ZD11

Specifications

Species Reactivity:	Humans; others not tested.
Applications:	Immunohistochemistry (FFPE tissues)
Storage:	Store at 2˚C to 8˚C
Reagents:	Anti-mouse HRP/anti-rabbit HRP (100 ml) DAB Chromogen Concentrate (6.25 ml) DAB Substrate Buffer (118.75 ml)

Zeta Universal HRP Polymer Detection (without DAB) Cat#: ZD10

Specifications

Species Reactivity:	Humans; others not tested.
Applications:	Immunohistochemistry (FFPE tissues)
Storage:	Store at 2˚C to 8˚C
Reagents:	Anti-mouse HRP/anti-rabbit HRP (100 ml)

Detection Reagents and Tools

Zeta Antibody Diluent, 500 ml

Antibody Diluent is provided as a ready-to-use (Tris Buffered) diluent for diluting primary antibodies and for use as a negative control. Antibodies are stabilized for long-term storage thereby reducing the number of titrations required from concentrated form. **Cat#: ZD19**

Zeta Citrate Plus HIER Solution (10X), 1L

Citrate Plus (10X) HIER Solution is a unique citrate buffer designed to significantly enhance immunohistochemical staining with many commercially available primary antibodies. Diluted 1:10 with deionized or distilled water, this product is easy to use and highly effective. **Cat#: ZD2**

Zeta Tris-EDTA HIER Solution (10X), 500 ml

Tris-EDTA HIER Solution (10x) pH 9.0) is a unique buffer designed to significantly enhance immunohistochemical staining with many commercially available primary antibodies. Diluted 1:10 with deionized or distilled water. Easy to use and highly effective. **Cat#: ZD6**

Zeta TBS plus Tween 20 pH 7.4, (20X) 500 ml

Zeta Tris Buffered Saline + Tween 20 (20x Concentrate) pH of 7.4 is an optimal formulation of pH stabilizers, salts and detergents designed to effectively remove excess material from the tissue sample or microtiter plate wells without disrupting the antibody binding reaction. **Cat#: ZD5**

Zeta PBS plus Tween 20 pH 7.6 (20X), 1L

Zeta Wash buffer formulations are an optimal formulation of pH stabilizers, salts and detergents designed to effectively remove excess material from the microtiter plate wells without disrupting the ELISA binding reaction. **Cat#: ZD3**

Zeta PAP Pen

PAP-Pen (Liquid Blocker) makes a water repellent barrier for manual IHC staining. **Cat#: ZD1**

PD-L1 Zeta-Antibody ZR3 Sheds the Light on Various Human Tumors

A **ZETA Corporation** White Paper

Authors: Dr. rer. nat. Andreas Herrmann and Peiguo Chu M.D. *March, 2024*

SUMMARY:

The single-pass transmembrane protein PD-L1 (B7-H1) experienced increased attention upon its identification in limiting immune responses and expression by many malignant cells. PD-L1 (clone ZR3) tips the balance in favor of reliable determination of pulmonary carcinomas acquiring PD-L1 protein expression and has the potential to support treatment option considerations including but not limited to lung cancer patients.

The expression of transmembrane protein PD-L1 (B7-H1, CD274) was initially observed in antigen-presenting cells APCs, limiting adaptive immune responses by interacting with exhausted PD-1+ T cells thereby blocking TCR signaling. However, PD-L1 expression by cancer cells **(Fig. 1)** was identified to critically contribute to immune evasion.

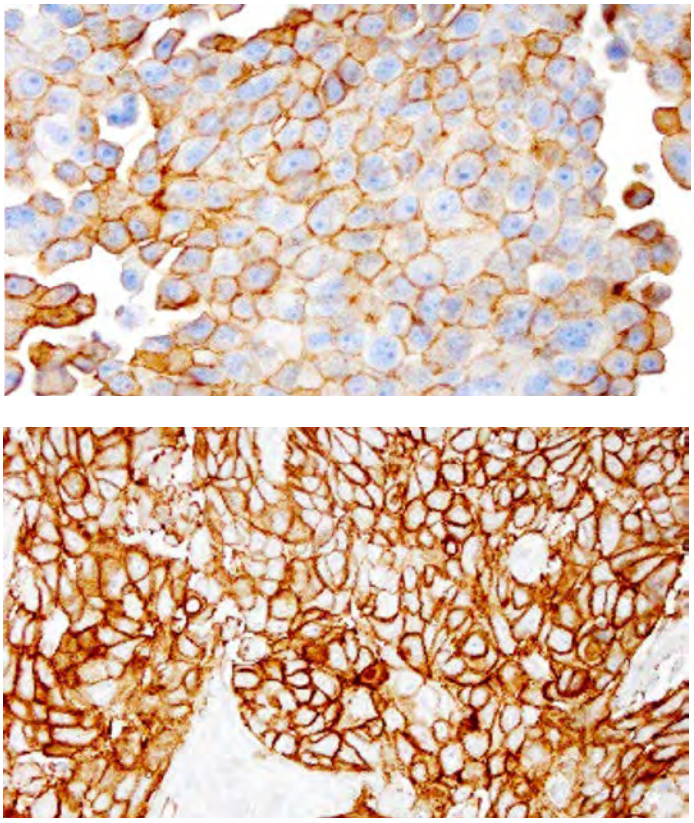


Figure 1: PD-L1 ZR3 Zeta-Antibody. IHC staining of PD-L1 (brown) in human lung adenocarcinoma (top) and lung squamous cell carcinoma (bottom). Images property of Zeta Corporation.

Lung adenocarcinoma is distinguished from lung squamous cell carcinoma through acquiring TTF1 and napsin A or p40 protein expression, respectively. However, additional detection of PD-L1 protein expression is employed for reliable disease prognosis and projected evaluation of treatment options requiring excellent antigen acquisition.

Furthermore, PD-L1 is reported to be frequently over-expressed in melanoma, and carcinomas of the lung, stomach, bladder, and breast.

The expression of PD-L1 (B7-H1) protein underlies a wide range of multifaceted molecular circuitries facilitating a broad and promiscuous PD-L1 expression signature **(Fig. 2)**.

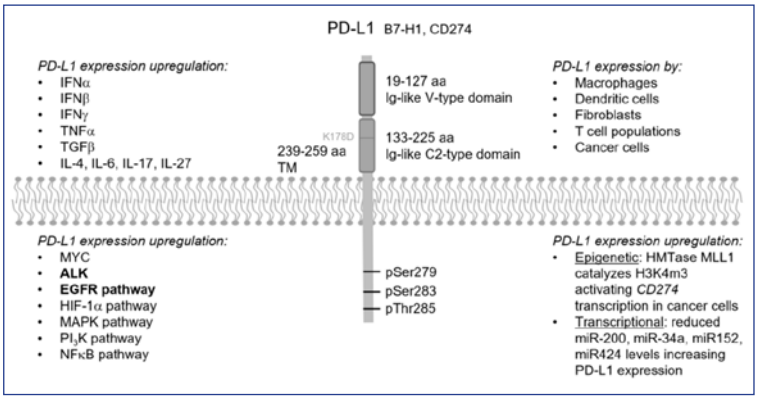


Figure 2: PD-L1 (B7-H1) multifaceted regulation in cancer. PD-L1 protein domain structure and protein expression regulatory mechanisms, i.e. cytokines (upper left), kinases and pathways (lower left), epigenetic and transcriptional mechanisms (lower right). Illustration courtesy of AH.

The newly established Zeta-Antibody PD-L1 clone ZR3 sheds critical light on pulmonary carcinomas as well as a variety of other types of human neoplasms, and potentially could contribute and support future treatment option considerations to help patients battling cancer. Notably, the PD-L1 (ZR3) antigen recognition signature and pattern is similar to that of well investigated clone 22C3 and hence inevitably introduces a new potential substitute to clone 22C3.

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PRAME Zeta-Antibody ZR383 is getting Under the Skin

A **ZETA Corporation** White Paper

Authors: Dr. rer. nat. Andreas Herrmann and Peiguo Chu M.D. *March, 2024*

SUMMARY:

The predominantly nuclear residing protein PRAME is significantly overexpressed restricted to malignant melanoma and premalignant melanocytic lesions. The PRAME Zeta-Antibody clone ZR383 readily assesses the PRAME antigen in tissue microsections preserved in paraffin with reduced liabilities of antigen cross presentation and potentially could facilitate the reliable determination of skin melanocytic malignancies.

The soluble but also membranous factor PRAME, belonging with MAGE, BAGE, GAGE, NY-ESO1, and LAGE-1 to the CTA gene family, is not expressed in healthy tissue but preferentially in melanoma, which coined its name **(Fig. 1)**.[1] Herein, high expression of PRAME is observed in 88% of primary melanoma tissue and in 95% of advanced and metastatic tissue in melanoma.[2]

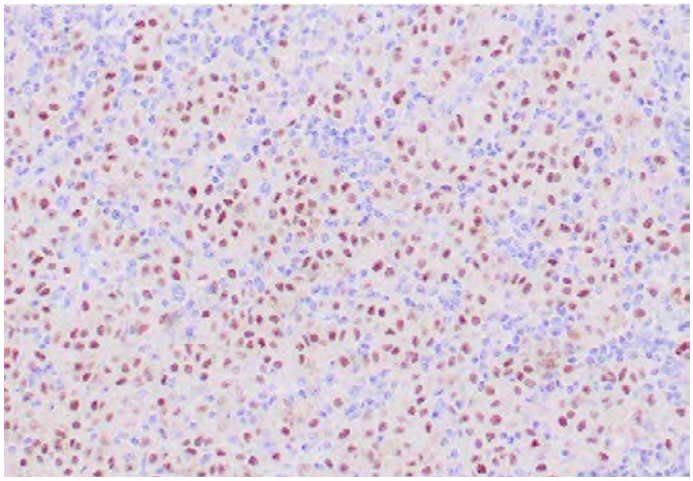

Figure 1: PRAME Zeta-Antibody ZR383. IHC staining of PRAME in human melanoma. Image property of Zeta Corporation.

The factor PRAME has been emphasized to inhibit retinoic acid/retinoic acid receptor RA/RAR signal transduction circuitries thereby contributing to melanoma tumorigenesis and other skin lesions.[1,3]

Moreover, PRAME contributes to the degradation of cell cycle inhibitor p14^{ARF} conferring a cell proliferative advantage.[4]

Interestingly, PRAME belongs to the CTA gene family encoding antigen peptides recognized by T lymphocytes, which elevated the attention on PRAME and other gene family members for therapeutic approaches dramatically.[5]

The PRAME Zeta-Antibody ZR383 maps to the C-terminal moiety of the PRAME antigen that encodes for the interface critical for interaction with the RA/RAR signal transduction circuitries **(Fig. 2)**.

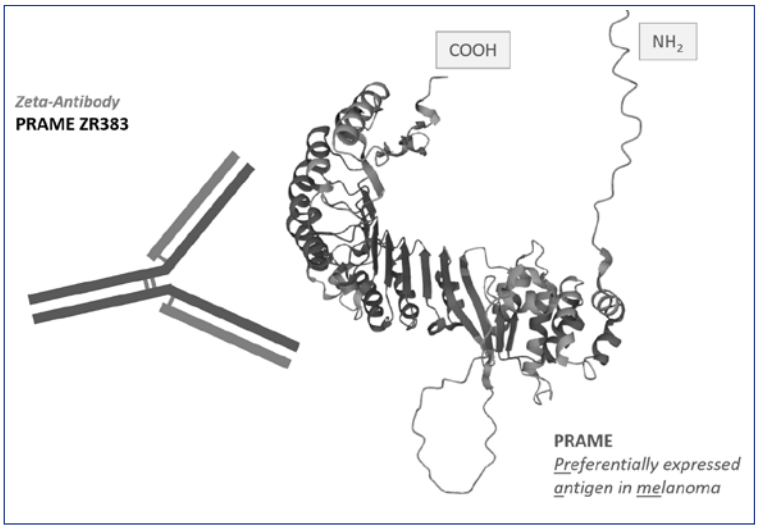

Figure 2: PRAME Zeta-Antibody ZR383 epitope mapping to PRAME C-terminus. Antigen recognition by ZR383 illustrated.[6]

Thus, PRAME Zeta-Antibody clone ZR383 readily assesses PRAME protein expression in premalignant melanocytic lesions and malignant melanoma.

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BRAF (V600E) Zeta-Antibody ZR6 in Human Neoplasms

A **ZETA Corporation** White Paper

Authors: Dr. rer. nat. Andreas Herrmann and Peiguo Chu M.D. *April, 2024*

SUMMARY:

The mutationally activated BRAF encoding the constitutively active BRAF-V600E oncoprotein is the most frequent oncogenic driver in melanoma. The BRAF Zeta-Antibody clone ZR6 readily assesses the BRAF-V600E oncoprotein in formalin-fixed and paraffin-embedded tissue sections.

The RAF serine/threonine kinases have been delineated to feed-forward the MAPK signaling pathway mediating mitogenic cellular activity and cell division via the RAS/RAF/MEK/ERK/ELK cascade.[1,2] Originally identified as *v-raf* in 1983, the oncogenic potential of RAF kinases became clear in 1984.[2] In 2002, frequent point mutations of the *BRAF* gene were reported in various human cancers at lower frequencies but in 66% of malignant melanoma wherein the BRAF (V600E) mutation accounted for 80% **(Fig. 1)**.[3]

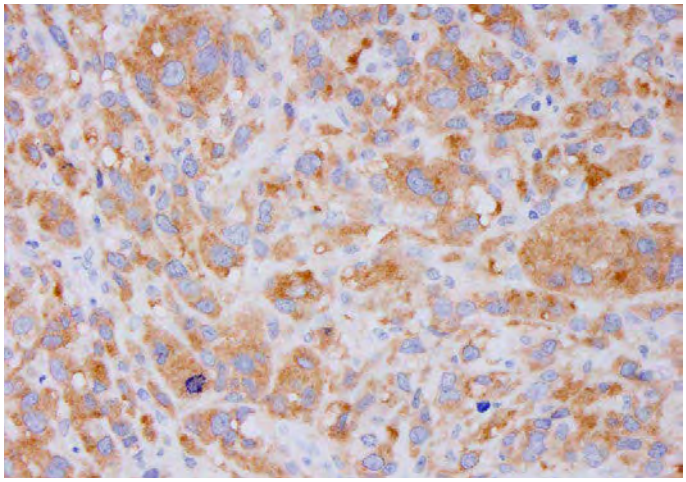

Figure 1: BRAF (V600E) Zeta-Antibody ZR6. IHC staining by BRAF (V600E) (ZR6) in human melanoma. Image property of Zeta Corporation.

In BRAF (V600E)+ melanoma, the upstream RAS kinase activity is not required for cellular division, indicating BRAF (V600E) as a distinct and defining driver of malignant disease progression in melanoma.[3]

Although BRAF (V600E)+ mutation in malignant melanoma is prevalent, the BRAF gene encoding the V600E mutant has been identified in other solid tumors such as thyroid cancer, bladder urothelial cancer, chronic lymphocytic leukemia, colorectal cancer, glioblastoma multiforme (GBM), head and neck squamous cell carcinoma, renal papillary cell carcinoma, hepatocellular carcinoma, lung adenocarcinoma, and lymphoma.[4]

The BRAF (V600E) Zeta-Antibody ZR6 recognizes the mutated valine V600 changed to the highly polar and acidic glutamate E sidechain $-CH_2-CH_2-COO^-$ typically physiologically ionized **(Fig. 2)**.

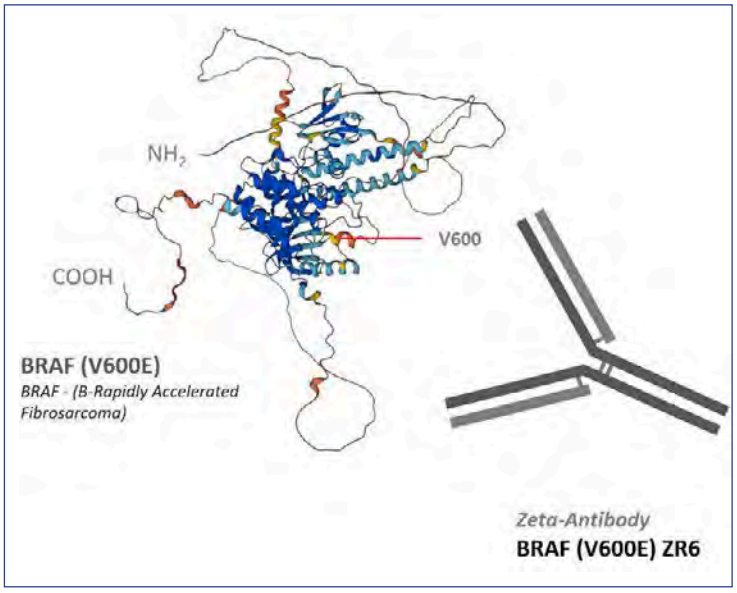

Figure 2: BRAF Zeta-Antibody ZR6 epitope mapping to BRAF (V600E). Antigen recognition by ZR6 illustrated. – Illustration courtesy of A. Herrmann.[6]

In the young history of BRAF (V600E) antibodies with the first one discovered in 2011,[5] the Zeta BRAF (V600E) Antibody clone ZR6 represents a new and favorable option in the detection of BRAF (V600E) in malignant melanoma and other malignancies..

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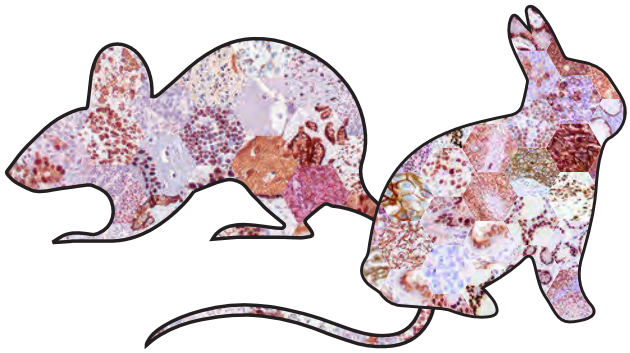

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