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Immunohistochemistry – Selected Reagents for Diagnostics and Research

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Compilation of positive controls for primary antibodies used in immunohistochemistry

Antigen/Antibody	Positive control	Antigen/Antibody	Positive control
14-3-3 Beta Protein	Prostate carcinoma, liver tumour	Cadherin (Pan)	Tonsil
14-3-3 Zeta Protein	Breast carcinoma	E-Cadherin	Ductal breast carcinoma
ACTH	Pituitary gland	Calbindin	Kidney
Actin (Muscle)	Skeletal muscle	Calcitonin	Thyroid gland
Actin (Muscle, Pan)	Skeletal muscle	Caldesmon (HMW)	Skeletal muscle
Actin alpha (Sarcomeric)	Skeletal muscle	Calmodulin-dependend Protein Kinase IV	Brain
Actin alpha (Skeletal Muscle)	Skeletal muscle	Calpain	Breast carcinoma
Actin alpha (Smooth Muscle)	Leiomyosarcoma	Calpastatin	Breast carcinoma
Actinin alpha	Skeletal muscle	Calponin	Breast carcinoma
Adenovirus	Adenovirus-infected tissue	Calretinin	Mesothelioma
ADH-5 (Breast Marker Double Stain Cocktail)	Breast carcinoma	Carbonic Anhydrase IX (CA IX)	Placenta
AFP (Alpha Fetoprotein)	Fetal liver	Caspase 1	Clear cell RCC
Akt1	Breast carcinoma	Caspase 3 (CPP32)	Tonsil
Akt1/2	Breast carcinoma	Caspase 3, cleaved (CPP32)	Tonsil, colon carcinoma, apoptotic cells
Albumin (HSA)	Liver	Caspase 6 (MCH2)	Tonsil
Aldh 1a1 (Alkohol Dehydrogenase 1)	Colon carcinoma, breast carcinoma	Caspase 8 (FLICE)	Stomach
ALK /p80 (Anaplastic Lymphoma Kinase)	ALK-positive lymphoma	Caspase 9 (Apaf-3)	Stomach, tonsil
Alpha-1-Antichymotrypsin	Tonsil	Caspase 10 (FLICE2)	Liver carcinoma
Alpha-1-Antitrypsin (AAT)	Tonsil	Catenin (alpha)	Breast carcinoma
Alpha-2-Macroglobulin	Tonsil	Catenin (beta)	Breast carcinoma
Amylin (Peptide)	Pancreas	Catenin (delta), p120	Breast carcinoma
Amyloid A Component	Kidney	Catenin (gamma) (Plakoglobin)	Breast carcinoma
Amyloid Beta (A4)	Alzheimer brain	Cathepsin D	Breast carcinoma
Amyloid Beta-Protein	Alzheimer brain	Cat Scratch Disease	Bartonella henselae-infected tissue
Amyloid Precursor Protein (APP)	Brain	Caveolin-1	Lung carcinoma
Androgen Receptor	Prostate carcinoma	CCR7	Small intestine
Annexin A1	Hairy cell leukaemia	CD1a	Histiozytosis X, tonsil
Annexin IV	Liver	CD2	Tonsil
APC (Adenomatous Polyposis Coli)	Colon carcinoma	CD3	Tonsil
ATM (Ataxia Telangiectasia Mutated)	Breast carcinoma	CD3 zeta	Jurkat cells, tonsil
BAG-1/RAP46/HAP1	Breast carcinoma	CD4	Tonsil
Bak	Tonsil	CD5	Tonsil, mantle cell lymphoma
Bax	Hodgkin's Lymphoma	CD7	Tonsil
BCA-225 (BRST-1)	Breast carcinoma	CD8	Tonsil
Bcl-2	Tonsil	CD9	Tonsil
Bcl-6	Tonsil	CD10 (CALLA)	Small intestine, tonsil
Bcl-10	Tonsil	CD11c	Hairy cell leukaemia
Bcl-X	Hodgkin's Lymphoma	CD14	Tonsil, diffuse large-cell B-cell lymphoma
Bcl-XL	Hodgkin's Lymphoma	CD15	Reed-Sternberg cells, tonsil
BCRP	Drug-sensitive cell line (MCF-7), fetal intestine	CD19	Tonsil
beta-HCG	Placenta	CD20	Tonsil
BG-1 Precursor (Blood Group Antigen)	Kidney, ureter	CD21	Tonsil
BG-2 A (Blood Group Antigen)	Kidney, ureter	CD23	Tonsil
BG-3 B (Blood Group Antigen)	Kidney	CD25	Tonsil
BG-4 0 (Blood Group Antigen)	Colon, colon carcinoma	CD29 (Integrin-beta1)	Cerebellum
BG-5 Lewis a (Blood Group Antigen)	Colon, colon carcinoma	CD30 (Ki-1)	Small intestine, tonsil
BG-6 Lewis b (Blood Group Antigen)	Colon carcinoma	CD31 (PECAM-1)	Placenta, tonsil
BG-7 Lewis x (Blood Group Antigen)	Kidney	CD34 (Endothelial cells)	Tonsil
BG-8 Lewis y (Blood Group Antigen)	Colon carcinoma	CD35 (CR1) (Dentritic Reticulum)	Tonsil
BOB.1	Tonsil, lymph node	CD40	Tonsil
BRCA1	Ovary carcinoma	CD43 (Leukosialin, Sialoporphin)	Lymph node, tonsil
C3d	Graft rejection after kidney transplantation	CD44 (H-CAM)	Tonsil
C4d	Graft rejection after kidney transplantation	CD45 (LCA)	Tonsil
CA 19-9 (Colon)	Colon carcinoma	CD45RA	Tonsil
CA 72.4 Antigen/TAG-72 (BRST-3)	Breast carcinoma	CD45RB	Tonsil
CA 125 Antigen	Ovary carcinoma, colon carcinoma		

Antigen/Antibody Positive control

CD45RO	Lymph node, tonsil
CD56 (N-CAM, NKH1, SCLC)	Small-cell lung carcinoma, neuroblastoma
CD57 (NK cells)	Lymph node, tonsil
CD61 (Integrin beta 3)	Tonsil
CD63 (NK-1/C3)	Melanoma
CD68 (Macrosialin, macrophage antigen)	Tonsil
CD74	Tonsil
CD79a	Tonsil
CD95 (Fas, Apo-1)	Small intestine
CD95L (FAS Ligand) CD178	Prostate
CD99/MIC2 (Ewing's sarcoma)	Ewing sarcoma, pancreas
CD105 (Endoglin, TGF beta 1/3 Receptor)	Tonsil
CD117 (c-Kit)	Tonsil, stroma tumour (GIST)
CD138 (Syndecan-1)	Plasmocytoma, tonsil
CD163	Lung
CD274 (B7-H1)	Tonsil, lung, skeletal muscle
CDC25A	Tonsil
CDC25B	Tonsil
CDC25C	Breast carcinoma
CDC37	Thymus
CDC47	Breast carcinoma
Cdk2 (Cyclin dependent Kinase 2)	Tonsil
Cdk4 (Cyclin dependent Kinase 4)	Liposarcoma
Cdk5 (Cyclin dependent Kinase 5)	Brain
CDw75 (B-Cell)	Tonsil
CDX1	Small intestine
CDX2	Colon carcinoma
CEA (Carcinoembryonic Antigen, CD66e)	Colon carcinoma
c-FOS	Skin
CFTR	Pancreas
Cholecystokinin (26-33)	Small intestine
Chromogranin A	Pancreas
CITED-1 (CBP, CREB-binding protein, p300)	Papillary thyroid gland carcinoma
Claudin 1	Skin, breast carcinoma
Claudin 2	Colon carcinoma, ovary carcinoma, tonsil
Claudin 3	Small intestine
Claudin 4	Ovary carcinoma, tonsil
Claudin 5	Colon carcinoma, lung
Claudin 7	Colon carcinoma
Claudin 10	Brain, skeletal muscle
c- Met (Hepatocyte Growth Factor Receptor)	Breast carcinoma
c-Myc	Breast carcinoma
Collagen IV	Skin
Connexin 43	Heart
COX-1 (Cyclooxygenase 1)	Skin
COX-2 (Cyclooxygenase 2)	Colon carcinoma, breast carcinoma
c-TEN	Liver carcinoma
CUL-1	Tonsil
CUL-2	Tonsil
CUL-3	Tonsil
Cyclin A	Tonsil
Cyclin B1	Breast carcinoma, tonsil
Cyclin D1 (Bcl-1)	Breast carcinoma, mantle cell lymphoma, tonsil
Cyclin D3	Breast carcinoma, tonsil
Cyclin E	Breast carcinoma, placenta
Cyr61	Placenta
Cystatin A	Brain
Cytokeratin (Acidic)	Skin
Cytokeratin (Basic)	Skin
Cytokeratin (HMW)	Skin, prostate
Cytokeratin (OSCAR)	Bladder, skin, liver, breast carcinoma
Cytokeratin (Pan)	Skin, tonsil
Cytokeratin Pan Plus	Skin, adenocarcinoma

Antigen/Antibody Positive control

Cytokeratin (Wide Spectrum)	Skin
Cytokeratin 4	Skin
Cytokeratin 5	Skin
Cytokeratin 5 & 6	Skin, prostate
Cytokeratin 5 & 8	Skin, lung
Cytokeratin 5 & 14	Skin, prostate
Cytokeratin 6	Skin
Cytokeratin 7	Skin, breast carcinoma
Cytokeratin 8	Skin
Cytokeratin 8 & 18	Skin, breast carcinoma
Cytokeratin 10	Skin
Cytokeratin 10 & 13	Skin
Cytokeratin 13	Skin
Cytokeratin 14	Skin, squamous cell carcinoma
Cytokeratin 15	Skin
Cytokeratin 16	Skin, squamous cell carcinoma
Cytokeratin 17	Skin
Cytokeratin 18	Skin, lung carcinoma, breast carcinoma
Cytokeratin 19	Skin, colon carcinoma
Cytokeratin 20	Colon carcinoma
Cytomegalovirus (CMV)	CMV-infected tissue
Desmin	Leiomyoma
Desmoglein 3	Breast carcinoma
DHFR (Dihydrofolate Reductase)	Squamous cell carcinoma of lung
DNA Polymerase B	Testicles
DOG1	Gastrointestinal stroma tumour
Dysferlin	Skeletal muscle
Dystrophin	Skeletal muscle
E2F-1 Transcription Factor	Breast carcinoma, tonsil
E2F-4 Transcription Factor	Breast carcinoma, tonsil
E-Cadherin	Ductal breast carcinoma
EGFr (Epidermal Growth Factor Receptor)	Placenta, squamous cell carcinoma
Elastin	Heart
EMA (Epithelial Membrane Antigen)	Colon carcinoma, breast carcinoma
eNOS (endothelial NO-Synthase)	Vascular endothelia
Epithelial Specific Antigen (ESA, Ep-CAM)	Breast carcinoma
Epstein Barr Virus (EBV)(Cocktail)(LMP-1)	EBV-infected tissue
ERAB	Alzheimer brain
ERCC1	Tonsil, lung carcinoma
ERG	Prostate carcinoma
ERK1 (Extracellular Regulated Kinase)	Breast carcinoma
ERK2 (Extracellular Regulated Kinase)	Breast carcinoma
Estrogen Receptor	Breast carcinoma
Estrogen Receptor beta	Breast carcinoma, ovary, endometrium
Ezrin (p81, Cytovillin)	Lung
F4/80	Mouse lung
Factor VIII Related Antigen (v. Willebrand Factor)	Tonsil
Factor XIIIa (Fibrinolygase, Plasma Transglutaminase)	Placenta
Fas-Associated Phosphatase (FAP-1)	Placenta
FBXW7 Endometrial adenocarcinoma	lung squamous cell carcinoma
FGFr1 (Fibroblast Growth Factor Receptor)	Breast carcinoma
FGFr2 (Fibroblast Growth Factor Receptor)	Liver cell carcinoma
FGFr3 (Fibroblast Growth Factor Receptor)	Breast carcinoma
Fibronectin	Kidney
Fli-1	Angiosarcoma
FLIP (Flice Inhibitor Protein)	Colon carcinoma, placenta
Follicular Dendritic Cells (FDC)	Lymph node, thyroid gland, tonsil
FOXA1	Breast carcinoma
FOXP3	Tonsil
FOXP4 (Forkhead BOX P4)	Lung
Fra2 (Fos Related Antigen 2)	Prostate carcinoma
FSH (Follicle Stimulating Hormone)	Pituitary gland

Antigen/Antibody	Positive control	Antigen/Antibody	Positive control
Galectin-3	Thyroid gland	IPO-38 (Proliferation Marker)	Spleen, tonsil
Gamma Glutamylcysteine Synthase (GCS)	Kidney, testicles	JAK3	Colon carcinoma, tonsil
Gastrin	Stomach	J-Chain	Tonsil
GATA-3	Breast, urothelial carcinoma	Kappa Light Chain	Tonsil
GCDFP-15 (BRST-2)	Breast carcinoma, salivary gland	Ki-67	Breast carcinoma, tonsil
GFAP (Glial Fibrillary Acidic Protein)	Astrocytome, brain	KOC/L5235	Prostate carcinoma, placenta
Glial Derived Neurotrophic Factor	Brain tumour	K-RAS	Colon carcinoma
Glucagon	Pancreas	Ksp-Cadherin	Kidney
GLUT1 (Glucose Transporter 1)	Breast carcinoma	Ku (p70)	Tonsil
GLUT3 (Glucose Transporter 3)	Placenta	Lactogen (Placental)	Placenta
Glutamat Decarboxylase 65	Pancreas	Lambda Light Chain	Tonsil
Glycophorin A	Erythrocytes	Laminin	Skin
Glycophorin C (CD236R)	Tonsil	Langerin	Langerhans cells
Glypican-3	Liver cell carcinoma	LK26	Ovary carcinoma
GNB2 (Guanine nucleotide binding protein 2)	Placenta	LMO2	Tonsil
Granulocyte (Myeloid Cell Marker)	Lymph node, tonsil	LPAP (Lymphocyte Phosphatase-Associated Phosphoprotein)	Tonsil
Granzyme B	Hodgkin's lymphoma, tonsil	Lung Related Protein, MVP (Major Vault Protein)	Breast carcinoma, adrenal gland
Growth Hormone, human (hGH)	Pituitary gland	Luteinizing Hormone (LH)	Pituitary gland
Hairy Cell Leukemia	Tonsil	Lymphatic Endothelium Marker (D2-40, Podoplanin)	Lymphatic endothelia (tonsil or appendix)
HCG (Human Chorionic Gonadotropin)	Placenta	Lysozyme (Muraminidase)	Tonsil
HDAC1 (Histone Deacetylase 1)	Tonsil	LYVE-1	Lymphatic endothelia (tonsil or appendix)
HDAC2 (Histone Deacetylase 2)	Tonsil	Macrophage	Lymph node, tonsil
Heat Shock Protein 60 (HSP60)	Breast carcinoma	MADL	Adenocarcinoma of lung
Heat Shock Protein 70 (HSP70)	Breast carcinoma	MAGE-1	Melanoma, tonsil
Helicobacter pylori	H. pylori-infected tissue	Mammaglobin	Breast carcinoma
Hemoglobin A	Bone marrow, spleen, placenta	MART-1 (MelanA)	Melanoma
Hepatitis B Core Antigen (HBcAg)	HBV-infected liver	Mast Cell Chymase	Tonsil
Hepatitis B Surface Antigen (HBsAg)	HBV-infected liver	Mast Cell Tryptase	Tonsil
Hepatitis C Virus (HCV)	HCV-infected liver	MCL-1 (Myeloid Cell Leukemia)	Tonsil
Hepatocyte (HepPar1)	Liver	MCM2	Tonsil
Hepatocyte Factor Homologue-4	Lung	MCM5	Cervix carcinoma
HER2 (c-erbB-2) Extracellulär domain	Breast carcinoma	MDM2 (Murine Double Minute 2)	Breast carcinoma, liposarcoma
HER2 (c-erbB-2) Intracellulär domain	Breast carcinoma	MDR1 (Multi Drug Resistance Protein, pg170)	Colon, liver, kidney
HER3 (c-erbB-3)	Breast carcinoma, skeletal muscle	MDR1+3 (Multi Drug Resistance Protein)	Adrenal cortex
HER4 (c-erbB-4)	Breast carcinoma	MEF-2	Brain
Heregulin (NDF, GGF, Neuregulin)	Prostate carcinoma	Melanoma (pan, MART-1+HMB45+Tyrosinase)	Melanoma
HGAL	Tonsil, lymph node	Melanoma (HMB45)	Melanoma
HHV8 (Human Herpes Virus)	HHV8-infected tissue	Melanoma Associated Antigen	Melanoma
HIF-1 alpha (Hypoxia Inducible Factor-1 alpha)	Breast carcinoma	Mesothelin	Mesothelioma
HLA-DR, DP, DQ, DX	Lymph node, tonsil	Mesothelioma	Mesothelioma
HMG2	Breast carcinoma	MGMT	Colon carcinoma, tonsil
HPV 16, L1 (Papilloma virus Type 16)	HPV 16-infected tissue	Microglia (Iba1)	Brain
HSV I (Herpes Simplex Virus)	HSV I-infected tissue	MIP-1alpha	Lung carcinoma
HSV I & II (Herpes Simplex Virus)	HSV I & II-infected tissue	MiTF (Microphthalmia Transcription Factor)	Melanoma
HSV II (Herpes Simplex Virus)	HSV II-infected tissue	MLH1	Colon, melanoma, tonsil
Huntingtin-Interacting Protein 1 (HIP-1)	Colon carcinoma	MMP-1 (Matrix Metalloproteinase 1)	Breast carcinoma, placenta
IgA	Tonsil	MMP-2 (Matrix Metalloproteinase 2)	Breast carcinoma, placenta
IgD	Tonsil	MMP-3 (Matrix Metalloproteinase 3)	Breast carcinoma, placenta
IgE	Tonsil	MMP-7 (Matrix Metalloproteinase 7)	Breast carcinoma, placenta
IgG	Tonsil	MMP-9 (Matrix Metalloproteinase 9)	Breast carcinoma, placenta
IgG4	Tonsil	MMP-10 (Matrix Metalloproteinase 10)	Breast carcinoma, placenta
IgM	Tonsil	MMP-11 (Matrix Metalloproteinase 11)	Placenta
IKAROS	Tonsil	MMP-14/MT-MMP (Matrix Metalloproteinase 14)	Breast carcinoma, placenta
Inhibin, alpha	Ovary, testicles	MMP-15/MT2-MMP (Matrix Metalloproteinase 15)	Placenta
INI-1	Brain, astrocytome, endothelial cells	MMP-19 (Matrix Metalloproteinase 19)	Placenta
iNOS (inducible NO-Synthase)	Lung	MMP-23 (Matrix Metalloproteinase 23)	Placenta
Insulin	Pancreas	MSH2 (MutS homologue 2)	Colon carcinoma, tonsil
Insulin-Like Growth Factor 1 Receptor (IGF1R)	Breast carcinoma, placenta	MSH3 (MutS homologue 3)	Colon carcinoma, tonsil
Insulin Receptor Substrate (IRS)	Colon carcinoma	MSH6 (MutS homologue 6)	Colon carcinoma, tonsil
Integrin beta 3 (CD61)	Tonsil		
Integrin beta 5	Small intestine, bone marrow		
Involucrin	Skin		

Antigen/Antibody Positive control

mTOR	Breast carcinoma
MUC1 (Mucin 1, CD227)	Breast carcinoma
MUC2 (Mucin 2)	Small intestine
MUC 5AC (Mucin 5AC)	Stomach
MUC18 (CD146)	Angiosarcoma
MUM1 Protein	Plasma cells, tonsil
Myelin Basic Protein (MBP)	Brain
Myeloperoxidase (MPO)	Spleen, tonsil
Myo D1	Tonsil
Myogenin	Rhabdomyosarcoma
Myoglobin	Skeletal muscle
Myosin	Skeletal muscle
Napsin A	Adenocarcinoma of the lung
NCK2	Breast carcinoma
N-Cadherin (Cadherin 2)	Pituitary gland
Nephrin	Kidney
Neurofilament H (200 kDa)	Brain
Neurofilament I & H (70/200 kDa)	Brain
NF kappa B (p50)	Testicles
NF kappa B (p65) (rel A)	Placenta, prostate
NGF-Receptor	Neurofibroma
Nkx3.1	Prostate carcinoma
eNOS (endothelial NO-Synthase)	Vascular endothelia
iNOS (inducible NO-Synthase)	Lung
uNOS (universal NO-Synthase)	Placenta
Notch-1	Colon carcinoma, breast carcinoma
Nrf2 (TCF 11)	Placenta
NSE (Neuron Specific Enolase)	Pancreas
Nucleophosmin (NPM, Numatrin)	Tonsil
Occludin	Lung, A431 cells
Oct-1 (Octamer Binding Transcription Factor 1)	Tonsil
Oct-2 (Octamer Binding Transcription Factor 2)	Tonsil
Oct-3/Oct-4 (Octamer Binding Transcription Factor 3/4)	Seminoma
Oct-4 (Octamer Binding Transcription Factor 4)	Seminoma
Osteopontin	Stomach carcinoma, osteosarcoma
p14 (ARF)	Breast carcinoma, cervix carcinoma
p14 (ARF) / p16 beta	Cervix carcinoma, fibroadenoma of breast
p15 (ink4b)	Colon carcinoma
p19 (ink4d)	Colon carcinoma
p21 (ros, WAF1)	Colon carcinoma, tonsil
p27 (KIP1)	Colon carcinoma
p34 (CDC2)	Breast carcinoma
p40	Squamous cell carcinoma of lung
p53	Colon carcinoma, breast carcinoma
p56 DOK2	Breast carcinoma
p57 (KIP2)	Colon carcinoma, placenta
p59 (Fyn)	Lymphoma
p62 DOK1	Breast carcinoma
p63	Skin, squamous cell carcinoma, prostate
p120 (Catenin delta)	Breast carcinoma
P504S (AMACR)	Prostate carcinoma
P504S & p63 (PIN Cocktail)	Prostate carcinoma
Pan Basal-Cell Cocktail (p63 & Cytokeratin 5/14)	Prostate, breast
Pan B Cocktail (CD20 & PAX-5)	Tonsil
Pancreatic Polypeptide	Pancreas
Par-4 (Prostate Apoptosis Response)	Alzheimer brain, myocardium
Parathyroid Hormone (PTH)	Parathyroid gland
Parathyroid Hormone Receptor 1 (PTHr)	Breast carcinoma

Antigen/Antibody Positive control

PAX-2	Kidney cell carcinoma
PAX-5	Tonsil
PAX-8	Kidney cell carcinoma
Paxillin	Colon carcinoma
PCNA (Proliferating Cell Nuclear Antigen)	Lymph node, tonsil
PD-1	Tonsil, lymph node
PDGF (Platelet Derived Growth Factor)	Breast carcinoma
PDGF (beta-chain) (Platelet Derived Growth Factor)	Angiosarcoma
PDGFr-alpha (CD140a)	Ovary carcinoma
PDGFr-beta (CD140b)	Ovary carcinoma
Perforin	Spleen
Phosphohistone H3 (pHH3)	Breast carcinoma, tonsil
Phospholipase C beta 1	Brain
Phospholipase C gamma 2	Hodgkin's lymphoma
Phosphoprotein (Pan) (PS/PT/PY)	Breast carcinoma
Phosphotyrosine	Breast carcinoma
PI3K/p85	Placenta, Breast carcinoma
PI3K/p110 beta	Placenta
PIN Cocktail (P504S & p63)	Prostate carcinoma
PLAP (Placental Alkaline Phosphatase)	Seminoma
PML Protein	Lymphoma
PMP22 (Peripheral Myelin Protein)	Nerve tissue
PMS2	Colorectal carcinoma
Pneumocystis carinii	Infected lung tissue
Podocin	Kidney
Podoplanin	Lymphatic endothelia
Progesterone Receptor	Breast carcinoma
Prohibitin	Heart
Prolactin (LTH, Luteotropic Hormone)	Pituitary gland
Protein Gene Product 9.5 (PGP9.5, UCH-L1)	Pancreatic carcinoma, tonsil
PSA (Prostate Specific Antigen)	Prostate
PsAP (Prostatic Acid Phosphatase)	Prostate
PsCA (Prostate Stem Cell Antigen)	Prostate carcinoma
PSMA (Prostate Specific Membrane Antigen)	Prostate
PTEN (MMAC1,TEP1)	Prostate, breast carcinoma
PU.1	Lymph node, tonsil
Ran	Mamma, Hela- or A431 cells
Ras	Tonsil
RCAS (BAG9)	Breast carcinoma
RCC1 (Regulator of Chromosome Condensation1)	Colon carcinoma
Renal Cell Carcinoma, gp200 (RCC)	Kidney, kidney cell carcinoma
Ret Oncoprotein	Small intestine
Retinoblastoma (Rb)	Colon carcinoma, breast carcinoma
ROC1	Tonsil
RPA (p34) (Replication Protein A)	Tonsil
RRM1 (Ribonucleotide Reductase M1 Polypeptide)	Placenta
S6 Ribosomal	Breast carcinoma
S100	Melanoma, nerve tissue
S100A4	Melanoma
S100P	Ductal adenocarcinoma of pancreas
SALL4	Seminoma
SATB2	Colorectal adenocarcinoma
Secretagogin	Pancreas, brain
Serotonin	Small intestine
Smad3	Breast carcinoma
Somatostatin Receptor 1 (SSTR1)	Prostate
Somatostatin Receptor 2A (SSTR2A)	Pancreas including Langerhans cells
Somatostatin Receptor 5 (SSTR5)	Pancreas including Langerhans cells
SOX2	Newborn brain
SOX4	Brain
SOX9	Testicles

Antigen/Antibody Positive control

SOX10	Malignant melanoma, melanocytes
SOX11	Mantle cell lymphoma
SOX14	Fetal tissue
STAT3	Tonsil
STAT5a	Tonsil
STAT6	Breast carcinoma
Stathmin	Tonsil, breast carcinoma, Jurkat-cells
Surfactant Apoprotein-A	Lung carcinoma
Survivin	Lymphoma
Synaptophysin	Pancreas
Syndecan-1 (CD138)	Tonsil
Syntaxin 1A	Brain
Synuclein (alpha)	Brain
Synuclein (beta) (Phosphoneuroprotein 14)	Brain
Synuclein (Pan)	Colon carcinoma, breast carcinoma
TAG-72 (Tumor associated Glycoprotein)	Alzheimer brain
TAU	Thymus
T-bet	Tonsil, hairy cell leukaemia
TdT (Terminal Deoxynucleotidyl Transferase)	Squamous cell carcinoma, tonsil
TGF alpha (Transforming Growth Factor)	Small intestine
TGF beta I (Transforming Growth Factor)	Placenta
TGF beta I Receptor	Placenta
TGF beta II (Transforming Growth Factor)	Small intestine
TGF beta III (Transforming Growth Factor)	Placenta
TGF beta III Receptor	Placenta
Thioredoxin Reductase 2 (TrxR2)	Colorectal carcinoma
Thrombin R	Pancreas
Thrombospondin (TSP)	Breast carcinoma
Thymidine Phosphorylase	Breast carcinoma
Thymidylate Synthase	Colon carcinoma
Thyroglobulin	Thyroid gland
Thyroid Hormone Receptor alpha 1/2	Colon carcinoma
Thyroid Hormone Receptor beta	Thyroid gland
Thyroid Peroxidase (TPO)	Breast carcinoma, ovary carcinoma
TIE-1	Tonsil
TIMP-1 (Tissue Inhibitor of Metalloproteinase)	Colon carcinoma, pancreas carcinoma
TIMP-2 (Tissue Inhibitor of Metalloproteinase)	Breast carcinoma, Placenta
TIMP-3 (Tissue Inhibitor of Metalloproteinase)	Breast carcinoma, Placenta
TNF (alpha)	Spleen
TNFr-2 (Tumor Necrosis Factor Receptor 2)	Tonsil
Topoisomerase II (alpha)	Tonsil, mantle cell lymphoma
Topoisomerase II (beta)	Tonsil
Toxoplasma gondii	Infected brain tissue
TRADD	Liver carcinoma
Transferrin	Liver
Transglutaminase II	Breast carcinoma
Treponema pallidum	Infected tissue
Trypsin	Pancreas
TSH (Thyroid Stimulating Hormone)	Pituitary gland
TTF-1 (Thyroid Transcription Factor 1)	Lung, thyroid gland
Tubulin, alpha	Skin, lung
Tubulin, beta	Skin, lung
Tyrosinase	Melanoma
Ubiquitin	Alzheimer brain
uNOS (universal NO-Synthase)	Umbilical cord, placenta
Upstream Transcription Factor 2 (USF2)	Breast carcinoma
Urocortin	Pituitary gland
Uroplakin II	Urothelial tissue
Uroplakin III	Urothelial tissue
URO Triple Stain Cocktail (CD44+p53+CK20)	Urothelial carcinoma, colon carcinoma
VEGF-A (Vascular Endothelial Growth Factor)	Astrocytome, haemangiosarcoma
VEGFr-1 (Flt-1)	Angiosarcoma
VEGFr-2 (Flk-1)	Angiosarcoma

Antigen/Antibody Positive control

VEGFr-3 (Flt-4)	Placenta, breast carcinoma
VGSC	Brain
Villin	Small intestine, kidney
Vimentin	Skin, melanoma, sarcoma
Vinculin	Skin
WNT1	Breast carcinoma
WT1 (Wilm's Tumor Protein-1)	Wilm's tumour
XRCC1	Testicles
XRCC2	Testicles
ZAP-70	Tonsil
ZO-3	Small intestine

This information is supplied without liability.

Selected Primary Antibodies

for formalin-fixed paraffin-embedded tissue sections

Zytomed Systems offers a broad range of antibodies suitable for diagnostics. Usually, our antibodies are available in concentrated and ready-to-use format. All antibodies mentioned here are suitable for FFPE tissue sections.

Ready-to-use antibodies: Designed for convenient handling these antibodies require no dilution or titration. Zytomed Systems offers 6 ml and 7 ml ready-to-use antibodies.

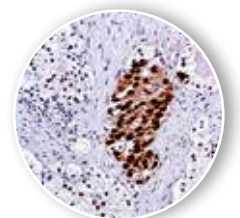
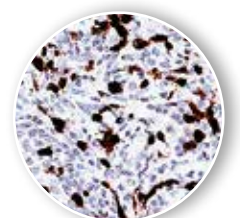
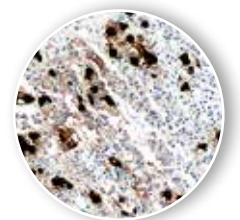
MAX-Line antibodies: These high-volume ready-to-use antibodies offer cost-effective solutions for manually as well as automated working laboratories with high throughput. They are provided in a 16 ml format.

Concentrated antibodies: To ensure highest flexibility in your immunohistochemistry protocol Zytomed Systems offers 1 ml, 0.5 ml and 0.1 ml concentrated antibodies.

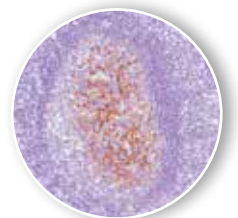
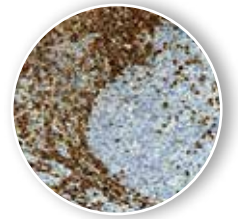
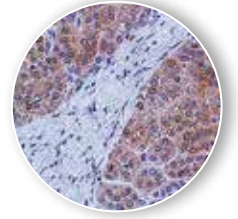
For a broad range of antibodies we offer protocol information for use on automated systems. These protocols were provided by customers and have already been approved in the day-to-day routine of an IHC laboratory. You can download a sheet with protocol recommendation from our homepage or ask your local dealer for more information.

► Primary Antibodies

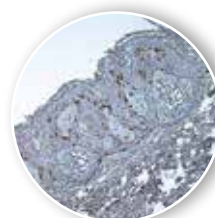
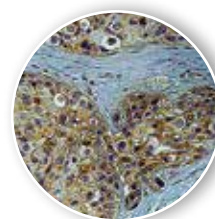
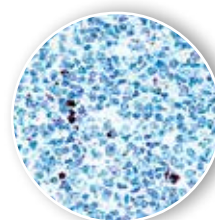
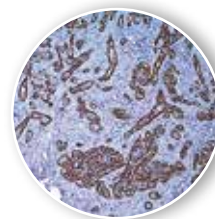
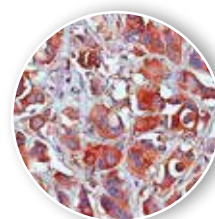
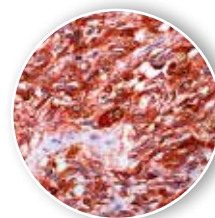
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
ACTH Clone: SPM501 Host: Mouse		HU	Citrate	Ready-to-use	-	7 ml	501-16451
				Concentrate	1:400	1 ml	501-16454
Actin alpha (Skeletal Muscle) Clone: 5C5.F8.C7 Host: Mouse		HU	Citrate	Ready-to-use	-	7 ml	501-16651
				Concentrate	1:50	1 ml	501-16654
Actin alpha (Smooth Muscle) Clone: 1A4 Host: Mouse	✓	HU, MS, RT, CH	None	Ready-to-use	-	16 ml	BMS001
				Ready-to-use		6 ml	MSG030
				Concentrate	1:100	1 ml	MSK030
				Concentrate		0.5 ml	MSK030-05
AFP (Alpha-Fetoprotein) Clone: polyclonal Host: Rabbit		HU	None	Ready-to-use	-	7 ml	501-2951
				Concentrate	1:200	1 ml	501-2954
Akt1, phosphorylated Ser473 Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	501-13451
				Concentrate	1:25	1 ml	501-13454
						0.1 ml	501-13450
ALK/p80 (Anaplastic Lymphoma Kinase) Clone: 5A4 Host: Mouse	✓	HU	Citrate	Concentrate	1:100-1:200	0.5 ml	MSK096-05
Alpha-1-Antichymotrypsin Clone: polyclonal Host: Rabbit		HU	None	Ready-to-use	-	7 ml	501-3451
				Concentrate	1:100	1 ml	501-3454
AMACR please see P504S							
Androgen Receptor Clone: SP107 Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	501-4071
				Concentrate	1:400	1 ml	501-4074



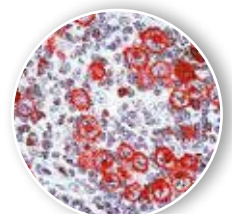
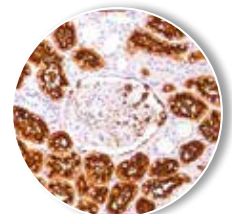
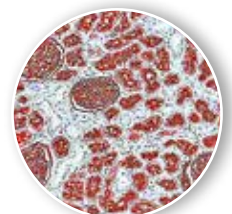
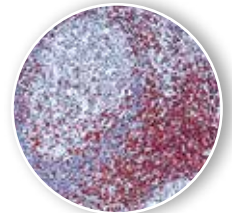
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Annexin (ANXA1) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	501-14031
				Concentrate	1:25	1 ml	501-14034
						0.5 ml	501-14032
Arginase-1 Clone: polyclonal Host: Rabbit		HU, BV, FG, PG, RB	Citrate	Concentrate	1:100	0.5 ml	501-19282
						0.1 ml	501-19280
Bak Clone: polyclonal Host: Rabbit		HU, MS a. o.	Citrate	Ready-to-use	-	7 ml	502-3321
				Concentrate	1:300	1 ml	502-3324
Bax Clone: SP47 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	502-3471
				Concentrate	1:50	1 ml	502-3474
Bcl-2 Clone: E17 Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	16 ml	BMS021
						6 ml	RBG016
				Concentrate	1:25-1:100	1 ml	RBK016
0.5 ml	RBK016-05						
Bcl-6 Clone: G1191E/A8 Host: Mouse		HU	Citrate	Ready-to-use	-	6 ml	MSG037
				Concentrate	1:100-1:500	0.5 ml	MSK037-05
Bcl-10 Clone: SP153 Host: Rabbit		HU, MS, RT, PG, BV	EDTA	Ready-to-use	-	7 ml	502-4531
				Concentrate	1:100	1 ml	502-4534
						0.5 ml	502-4532
β-Catenin see Catenin beta							
BOB-1 Clone: SP92 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	502-3921
						1 ml	502-3924
				Concentrate	1:100	0.5 ml	502-3922
						0.1 ml	502-3920
BRCA1 Clone: MS110 Host: Mouse		HU	Citrate	Concentrate	-	50 µl	602-0170
C3d Complement factor Clone: polyclonal Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG034
				Concentrate	1:100-1:500	0.5 ml	RBK034-05
C4d Complement factor Clone: polyclonal Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	7 ml	503-17341
						1 ml	503-17344
				Concentrate	1:100	0.5 ml	503-17342
						0.1 ml	503-17340
CA-9 (Carbonic Anhydrase 9) Clone: SP106 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-4061
				Concentrate	1:100	1 ml	503-4064
						0.5 ml	503-4062
CA 19-9 Antigen (Colon) Clone: 121SLE Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG094
				Concentrate	1:25-1:50	0.5 ml	MSK094-05





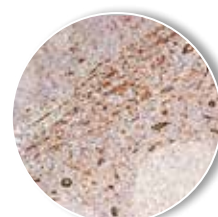
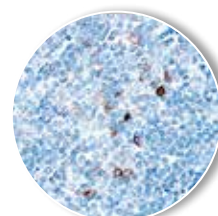
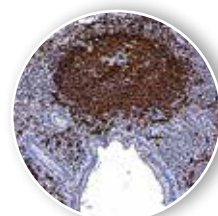
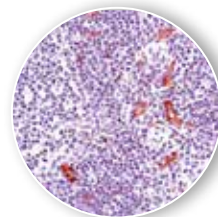
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CA 125 Antigen (Ovary) Clone: OC125 Host: Mouse		HU	Citrate	Ready-to-use	-	6 ml	603-0014
				Concentrate	1:10–1:40	1 ml	603-0013
Cadherin (Pan) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-2361
				Concentrate	1:100	1 ml	503-2364
Calcitonin Clone: SP17 Host: Rabbit		HU, MS, RT, DG, PG, HS, SH	Citrate	Ready-to-use	-	6 ml	RBG038
				Concentrate	1:100	1 ml	RBK038
						0.5 ml	RBK038-05
Caldesmon Clone: E-89 Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG040
				Concentrate	1:25–1:100	0.5 ml	RBK040-05
Calpain Clone: SP81 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-3811
				Concentrate	1:100	1 ml	503-3814
Calpastatin Clone: SP82 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-3821
				Concentrate	1:100	1 ml	503-3824
Calponin-1 Clone: EP789Y Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG041
				Concentrate	1:50–1:200	0.5 ml	RBK041-05
Calretinin Clone: polyclonal Host: Rabbit	✓	HU, MS, RT	Citrate	Ready-to-use	-	16 ml	BRB022
						6 ml	RBG003
				Concentrate	1:100–1:200	1 ml	RBK003
						0.5 ml	RBK003-05
Caspase-3, cleaved (CPP32) Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Concentrate	1:50–1:200	0.5 ml	RBK009-05
Catenin (beta) Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	503-2261
				Concentrate	1:250	1 ml	503-2264
Catenin (delta) p120 Clone: polyclonal Host: Rabbit		HU	Citrate	Concentrate	1:100–1:200	7 ml	503-17531
						1 ml	503-17534
Cathepsin D Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-2821
				Concentrate	1:50	1 ml	503-2824
Cat Scratch Disease Clone: H2A10 Host: Mouse		Bartonella henselae	Citrate	Ready-to-use	-	6 ml	MSG015
				Concentrate	1:50–1:100	0.5 ml	MSK015-05
CD1a (Cortical Thymocyte) Clone: EP3622 Host: Rabbit	✓	HU	Citrate or EDTA	Ready-to-use	-	6 ml	RBG045
				Concentrate	1:25–1:100	0.5 ml	RBK045-05



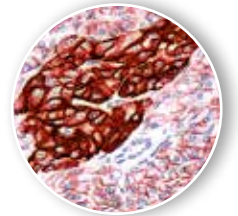
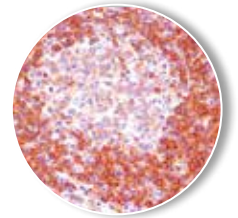
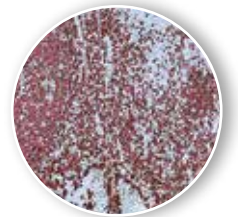
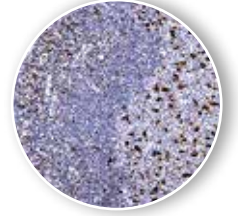
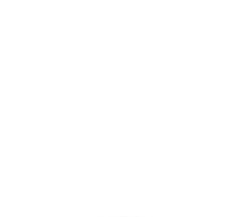
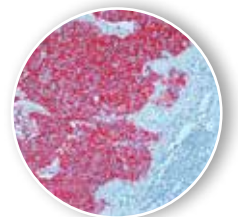
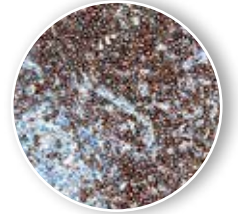
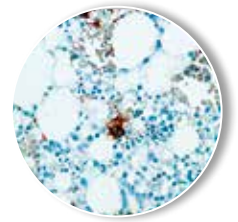
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CD2 Clone: polyclonal Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	503-3041
				Concentrate	1:50	1 ml	503-3044
CD3 (T-Cell) Clone: polyclonal Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG015
				Concentrate	1:200-1:400	1 ml	RBK015
CD3 (T-Cell) Clone: SP7 Host: Rabbit	✓	HU, MS, RT, PG	Citrate	Ready-to-use	-	16 ml	BRB041
						6 ml	RBG024
	Concentrate			1:150-1:200	1 ml	RBK024	
					0.5 ml	RBK024-05	
CD4 (T-Cell helper/ inducer) Clone: SP35 Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	16 ml	BRB042
						7 ml	503-3351
	Concentrate			1:50	1 ml	503-3354	
CD5 (T-Cell) Clone: SP19 Host: Rabbit		HU	Citrate	Ready-to-use	-	6 ml	RBG023
				Concentrate	1:50-1:100	0.5 ml	RBK023-05
CD8 (T-Cell cytotoxic/sup- pressor) Clone: SP16 Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	16 ml	BRB036
CD8 (T-Cell cytotoxic/sup- pressor) Clone: C8/144B Host: Mouse	✓	HU	EDTA	Ready-to-use	-	6 ml	MSG011
				Concentrate	1:100	1 ml	MSK011
						0.5 ml	MSK011-05
CD10 (CALLA) Clone: 56C6 Host: Mouse	✓	HU, RT	Citrate	Ready-to-use	-	16 ml	BMS043
						6 ml	MSG070
				Concentrate	1:25-1:50	1 ml	MSK070
						0.5 ml	MSK070-05
CD11c Clone: 5D11 Host: Mouse	✓	HU	Citrate or EDTA	Ready-to-use	-	6 ml	MSG093
				Concentrate	1:50-1:100	0.5 ml	MSK093-05
CD13 Clone: SP182 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	503-4821
						0.1 ml	503-4820
				Concentrate	1:100	0.5 ml	503-4822
						1 ml	503-4824
CD14 Clone: EPR3653 Host: Rabbit	✓	HU	Citrate	Concentrate	1:50-1:200	0.5 ml	RBK033-05
CD15 Clone: Carb-3 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG005
				Concentrate	1:50	1 ml	MSK005
						0.5 ml	MSK005-05




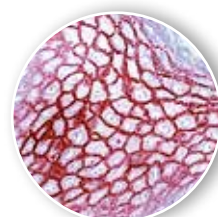
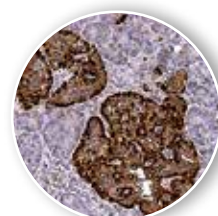
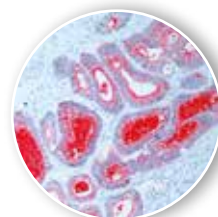
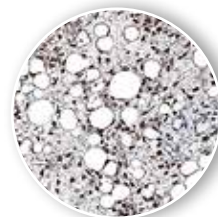
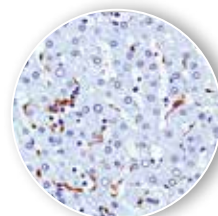
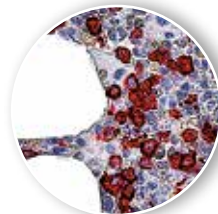
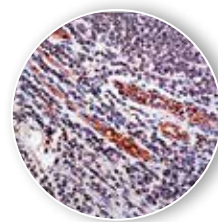
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
CD16a Clone: SP189 Host: Rabbit 		HU	EDTA	Ready-to-use	-	7 ml	506-4891
				Concentrate	1:100	1 ml	506-4894
						0.5 ml	506-4892
						0.1 ml	506-4890
CD19 (B-Cell) Clone: LE-CD19 Host: Mouse		HU	Citrate	Concentrate	1:100–1:200	0.5 ml	MSK043-05
CD20 (B-Cell) Clone: L26 Host: Mouse	✓	HU	optional: Citrate	Ready-to-use	-	16 ml	BMS003
				Concentrate	1:100–1:200	6 ml	MSG008
						1 ml	MSK008
						0.5 ml	MSK008-05
CD20 (B-Cell) Clone: SP32 Host: Rabbit		HU	None	Ready-to-use	-	6 ml	RBG030
				Concentrate	1:100	1 ml	RBK030
						0.5 ml	RBK030-05
CD21 Clone: EP3093 Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG036
				Concentrate	1:50–1:200	0.5 ml	RBK036-05
CD22 Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-19021
				Concentrate	1:200	1 ml	503-19024
CD23 Clone: SP163 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-4631
				Concentrate	1:50	1 ml	503-4634
						0.5 ml	503-4632
CD25 Clone: SP176 Host: Rabbit		HU, MS, RT	EDTA	Ready-to-use	-	7 ml	503-4761
				Concentrate	1:200	1 ml	503-4764
						0.5 ml	503-4762
						0.1 ml	503-4760
CD30 (Ki-1) Clone: Ber-H2 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG061
				Concentrate	1:40–1:80	1 ml	MSK061
						0.5 ml	MSK061-05
CD31 (PECAM-1) Clone: JC70 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	16 ml	BMS044
				Concentrate	1:50–1:200	6 ml	MSG091
						1 ml	MSK091
						0.5 ml	MSK091-05
CD31 Clone: SP38 Host: Rabbit 		HU, MS, PG	Citrate	Ready-to-use	-	7 ml	503-3381
				Concentrate	1:50	1 ml	503-3384
CD34 Clone: QBEnd/10 Host: Mouse	✓	HU	optional: Citrate	Ready-to-use	-	16 ml	BMS045
				Concentrate	1:200	7 ml	503-1281
						1 ml	503-1284



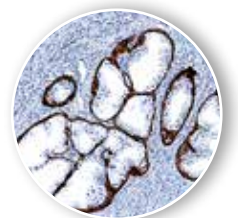
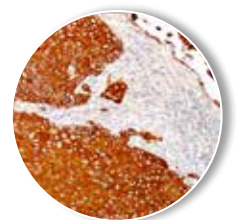
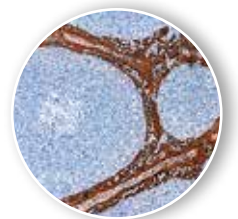
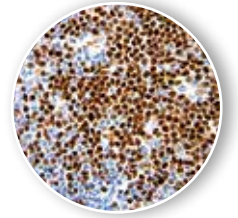
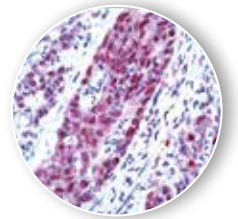
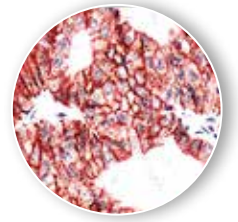
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
CD42b Clone: SP202 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	503-5021
				Concentrate	1:100	0.1 ml	503-5020
						0.5 ml	503-5022
						1 ml	503-5024
CD43 (Leukosialin, Sialophorin) Clone: DF-T1 Host: Mouse	✓	HU, RT	optional: Citrate	Ready-to-use	-	6 ml	MSG010
				Concentrate	1:100–1:200	1 ml	MSK010
						0.5 ml	MSK010-05
CD45 (LCA) Clone: PD7/26 + 2B11 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	16 ml	BMS046
				Concentrate	1:50–1:100	6 ml	MSG054
						1 ml	MSK054
						0.5 ml	MSK054-05
CD56 (N-CAM) Clone: RCD56 Host: Rabbit	✓	HU, MS, RT	EDTA	Ready-to-use	-	16 ml	BRB039
				Concentrate	1:100–1:500	6 ml	RBG050
						1 ml	RBK050
						0.5 ml	RBK050-05
CD61 Clone: 2f2 Host: Mouse	✓	HU	EDTA	Ready-to-use	-	6 ml	MSG086
				Concentrate	1:25–1:100	1 ml	MSK086
						0.5 ml	MSK086-05
CD63 Clone: SPM524 Host: Mouse		HU	Citrate	Ready-to-use	-	7 ml	503-17511
				Concentrate	1:200	1 ml	503-17514
CD68 (Macrophage Antigen) Clone: KP1 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG055
				Concentrate	1:50–1:100	1 ml	MSK055
						0.5 ml	MSK055-05
CD79a (B-Cell) Clone: JCB117 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	16 ml	BMS005
				Concentrate	1:50–1:100	6 ml	MSG036
						1 ml	MSK036
						0.5 ml	MSK036-05
CD79a (B-Cell) Clone: SP18 Host: Rabbit		HU, MS, RT, DG	Citrate	Ready-to-use	-	6 ml	RBG029
				Concentrate	1:100–1:200	1 ml	RBK029
						0.5 ml	RBK029-05
CD79b Clone: SP240 Host: Rabbit	NEW	HU	Citrate	Ready-to-use	-	7 ml	503-5401
				Concentrate	1:100	1 ml	503-5404
						0.5 ml	503-5402
						0.1 ml	503-5400
CD95 (Fas, Apo-1) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-2501
				Concentrate	1:60	1 ml	503-2504
CD99/MIC2 (Ewing's Sarcoma) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-3391
				Concentrate	1:200	1 ml	503-3394



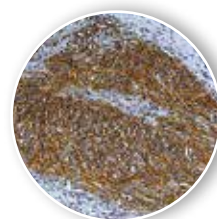
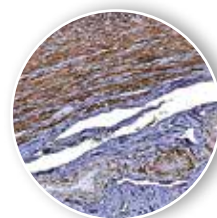
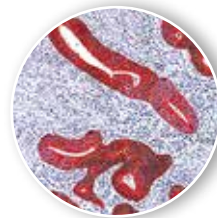
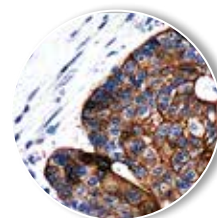
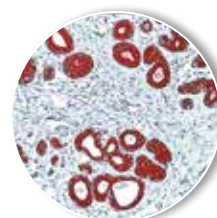
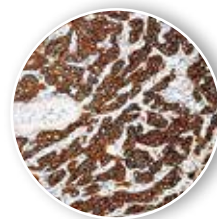
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
CD105 (Endoglin, TGF-beta1/3-Receptor) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-4231
				Concentrate	1:50	1 ml	503-4234
CD117/c-kit Clone: SP26 Host: Rabbit		HU	Citrate	Ready-to-use	-	6 ml	RBG021
				Concentrate	1:100	1 ml	RBK021
CD138 (Syndecan-1) Clone: B-A38 Host: Mouse	✓	HU, PG	Citrate	Ready-to-use	-	6 ml	MSG063
				Concentrate	1:200	1 ml	MSK063
CD163 Clone: SP96 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	503-3961
				Concentrate	1:100	1 ml	503-3964
CD169  Clone: SP213 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	519-5131
				Concentrate	1:100	1 ml	519-5134
						0.5 ml	519-5132
						0.1 ml	519-5130
Cdk4 (Cyclin dependent Kinase) Clone: DCS-31.2 Host: Mouse		HU, MS, RT	Citrate	Concentrate	1:100-1:250	0.1 ml	603-1840
6 ml	RBG019						
Concentrate	1:50-1:100	1 ml	RBK019				
		0.5 ml	RBK019-05				
CEA (Carcinoembryonic Antigen) Clone: Col-1 Host: Mouse	✓	HU	None	Ready-to-use	-	16 ml	BMS029
						6 ml	MSG022
				Concentrate	1:100-1:200	1 ml	MSK022
						0.5 ml	MSK022-05
Chromogranin A Clone: LK2H10 Host: Mouse	✓	HU, PG	None	Ready-to-use	-	16 ml	BMS018
						6 ml	MSG062
				Concentrate	1:200-1:400	1 ml	MSK062
						0.5 ml	MSK062-05
CITED-1 Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	516-14071
				Concentrate	1:100	1 ml	516-14074
c-kit please see CD117							
Claudin 1 Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	503-3411
				Concentrate	1:200	1 ml	503-3414



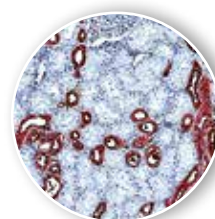
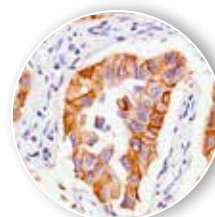
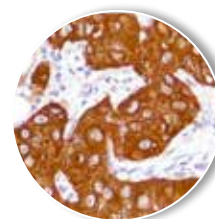
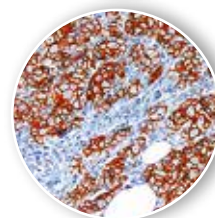
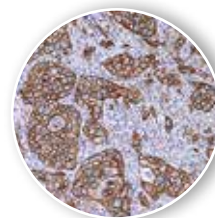
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
Claudin 4 Clone: polyclonal Host: Rabbit		HU, MS	Citrate	Ready-to-use	-	7 ml	503-3981
				Concentrate	1:200	1 ml	503-3984
Connexin 43 Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	503-2741
				Concentrate	1:50	1 ml	503-2744
COX-2 (Cyclooxygenase) Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	503-3031
				Concentrate	1:100	1 ml	503-3034
CUL-1, Cullin 1 Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-3791
				Concentrate	1:50	0.5 ml	503-3792
						0.1 ml	503-3790
Cyclin D1 Clone: SP4 Host: Rabbit		HU, MS, RT	Citrate or EDTA	Ready-to-use	-	6 ml	RBG025
				Concentrate	1:50-1:100	0.5 ml	RBK025-05
Cytokeratin HMW Clone: 34betaE12 Host: Mouse	✓	HU, RB, DG	Citrate or Pepsin	Ready-to-use	-	16 ml	BMS015
						6 ml	MSG027
				Concentrate	1:25-1:50	1 ml	MSK027
						0.5 ml	MSK027-05
Cytokeratin Pan Clone: AE1 + AE3 Host: Mouse	✓	HU, MS, RT, DG	Citrate or Pepsin	Ready-to-use	-	16 ml	BMS006
						6 ml	MSG019
				Concentrate	1:100-1:200	1 ml	MSK019
						0.5 ml	MSK019-05
Cytokeratin Pan Plus (AE1 & AE3 & 5D3) Clone: AE1+AE3+5D3 Host: Mouse	✓	HU, MS, RT	Citrate, EDTA, Pepsin, Trypsin	Ready-to-use	-	6 ml	MSG098
				Concentrate	1:50-1:100	0.5 ml	MSK098-05
Cytokeratin 5 & 6 Clone: D5/16B4 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	16 ml	BMS017
						6 ml	MSG034
				Concentrate	1:50-1:100	1 ml	MSK034
						0.5 ml	MSK034-05
Cytokeratin 5 & 14 Clone: XM26 + LL002 Host: Mouse	✓	HU	Citrate	Concentrate	-	16 ml	BMS023
Cytokeratin 6 Clone: SP87 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-3871
				Concentrate	1:200	1 ml	503-3874
						0.5 ml	503-3872
						0.1 ml	503-3870



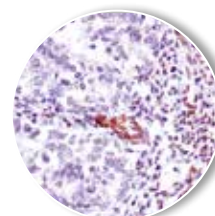
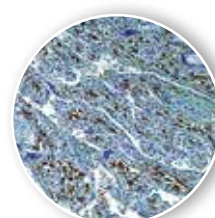
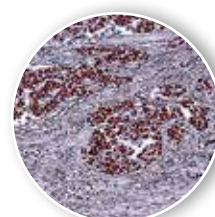
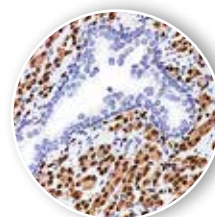
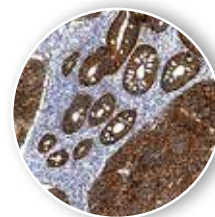
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
Cytokeratin 7 Clone: OV-TL 12/30 Host: Mouse	✓	HU	Citrate or enzymatic	Ready-to-use	-	16 ml	BMS030
						6 ml	MSG032
				Concentrate	1:100–1:200	1 ml	MSK032
						0.5 ml	MSK032-05
Cytokeratin 8 Clone: SP102 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-4021
				Concentrate	1:100	1 ml	503-4024
Cytokeratin 8 & 18 Clone: IVT2000 Host: Mouse		HU	Citrate or enzymatic	Ready-to-use	-	6 ml	MSG035
				Concentrate	1:100–1:200	1 ml	MSK035
						0.5 ml	MSK035-05
Cytokeratin 14 Clone: SP53 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-3531
				Concentrate	1:100	1 ml	503-3534
Cytokeratin 17 Clone: polyclonal Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	503-18921
				Concentrate	1:200	1 ml	503-18924
Cytokeratin 18 Clone: DC-10 Host: Mouse		HU	Citrate or enzymatic	Ready-to-use	-	6 ml	MSG016
				Concentrate	1:100–1:200	1 ml	MSK016
						0.5 ml	MSK016-05
Cytokeratin 19 Clone: A53-B/A2.26 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG017
				Concentrate	1:200–1:300	1 ml	MSK017
						0.5 ml	MSK017-05
Cytokeratin 20 Clone: Ks20.8 Host: Mouse	✓	HU	Pepsin or Trypsin	Ready-to-use	-	16 ml	BMS037
Cytokeratin 20 Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	503-16441
				Concentrate	1:200	1 ml	503-16444
D2-40 please see Podoplanin							
Desmin Clone: D33 Host: Mouse	✓	HU, MS, RT	Citrate	Ready-to-use	-	16 ml	BMS007
						6 ml	MSG053
				Concentrate	1:25–1:50	1 ml	MSK053
						0.5 ml	MSK053-05
DOG1 Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	516-16711
				Concentrate	1:100	1 ml	516-16714
DOG1 Clone: SP31 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	504-3311
				Concentrate	1:100	1 ml	504-3314
						0.2 ml	504-3315



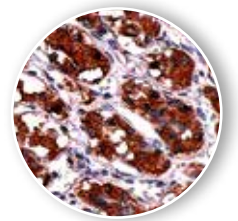
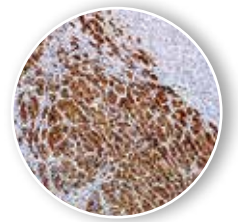
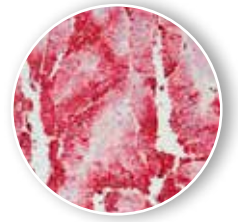
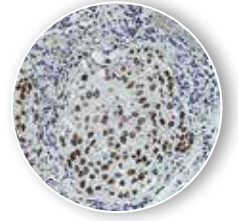
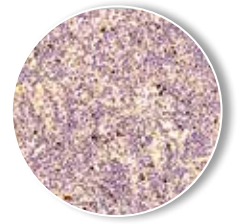
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
Dyserlin Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	504-2671
				Concentrate	1:50	1 ml	504-2674
Dystrophin Clone: SPM499 Host: Mouse		HU, RT	Citrate	Ready-to-use	-	7 ml	504-14011
				Concentrate	1:50	1 ml	504-14014
E-Cadherin Clone: EP700Y Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	16 ml	BRB047
						6 ml	RBG043
				Concentrate	1:50–1:200	1 ml	RBK043
						0.5 ml	RBK043-05
E-Cadherin Clone: ECH-6 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG033
						1 ml	MSK033
				Concentrate	1:100	0.5 ml	MSK033-05
EGFR (Epidermal Growth Factor Receptor) Clone: 2-1E1 Host: Mouse		HU	Citrate	Concentrate	1:100–1:200	0.5 ml	MSK014-05
EGFR (Epidermal Growth Factor Receptor) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	505-18171
						1 ml	505-18174
				Concentrate	1:50	0.5 ml	505-18172
						0.1 ml	505-18170
EGFR (E746-A750del) Clone: SP111 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	505-4111
						1 ml	505-4114
				Concentrate	1:100	0.5 ml	505-4112
						0.1 ml	505-4110
EGFR (L858R) Clone: SP125 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	505-4251
						1 ml	505-4254
				Concentrate	1:100	0.5 ml	505-4252
						0.1 ml	505-4250
EGFRVIII (Epidermal Growth Factor Receptor variant III) Clone: EGFRVIII.1 Host: Mouse		HU	optional: Citrate	Concentrate	1:20–1:50	0.5 ml	MSK029-05
EMA (Epithelial Membrane Antigen) Clone: E29 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG059
						1 ml	MSK059
				Concentrate	1:200–1:400	0.5 ml	MSK059-05
Epithelial Specific Antigen (ESA, Ep-CAM) Clone: Ber-EP4 Host: Mouse	✓	HU	Citrate or enzymatic	Ready-to-use	-	16 ml	BMS048



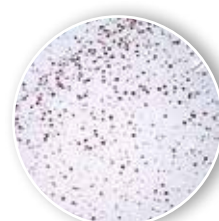
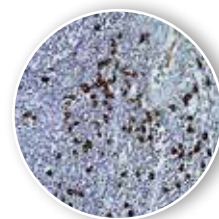
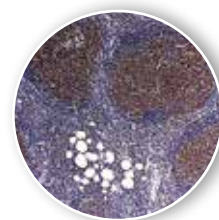
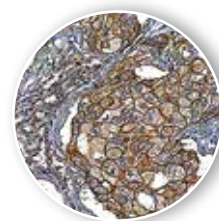
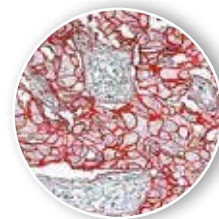
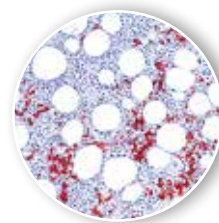
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
Epithelial Specific Antigen (ESA, Ep-CAM) Clone: MOC-31 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG066
				Concentrate	1:50-1:100	1 ml	MSK066
						0.5 ml	MSK066-05
ERCC1 (Excision Repair Cross Complement Group 1) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	505-18551
				Concentrate	1:100	1 ml	505-18554
						0.5 ml	505-18552
						0.1 ml	505-18550
ERG Clone: 9FY Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG090
				Concentrate	1:50-1:100	0.5 ml	MSK090-05
Estrogen Receptor Clone: 1D5 Host: Mouse	✓	HU, MS, RT, DG, PG	Citrate	Ready-to-use	-	16 ml	BMS008
						6 ml	MSG001
				Concentrate	1:100-1:200	1 ml	MSK001
						0.5 ml	MSK001-05
Estrogen Receptor Clone: SP1 Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	16 ml	BRB053
						6 ml	RBG018
				Concentrate	1:200	1 ml	RBK018
						0.5 ml	RBK018-05
Estrogen Receptor beta Clone: PPG5/10 Host: Mouse		HU, RT, MO	Citrate	Concentrate	1:10-1:20	0.5 ml	MSK042-05
Ewing Sarcoma Marker please see CD99							
Factor XIIIa (Fibrinolyase, Plasma Transglutaminase) Clone: EP3372 Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG044
				Concentrate	1:100-1:500	1 ml	RBK044
						0.5 ml	RBK044-05
FBXW7 Clone: SP237 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	506-5371
				Concentrate	1:100	1 ml	506-5374
						0.5 ml	506-5372
						0.1 ml	506-5370
Fli-1 Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	506-4281
				Concentrate	1:50	1 ml	506-4284
FOXP1 Clone: polyclonal Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	506-19061
				Concentrate	1:100	0.5 ml	506-19062
						0.1 ml	506-19060



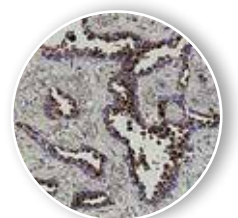
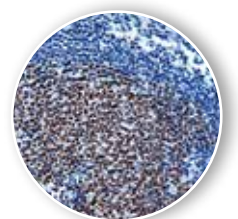
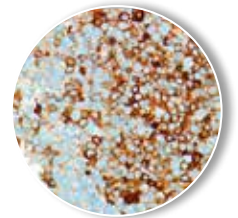
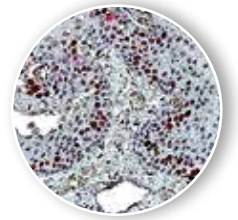
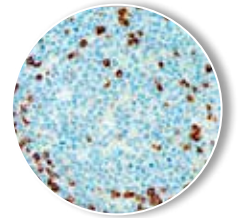
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
FOXP3 Clone: SP97 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	506-3971
				Concentrate	1:100	1 ml	506-3974
Gastrin-1 Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	507-4491
				Concentrate	1:200	1 ml	507-4494
GATA-3 Clone: L50-823 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG100
				Concentrate	1:100-1:200	0.5 ml	MSK100-05
GCDFP-15 (Gross Cystic Disease Fluid Protein 15) Clone: EP1582Y Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG032
				Concentrate	1:25-1:100	0.5 ml	RBK032-05
GFAP (Glial Fibrillary Acidic Protein) Clone: EP672Y Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG037
				Concentrate	1:25-1:100	1 ml 0.5 ml	RBK037 RBK037-05
Glucagon Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	507-18181
				Concentrate	1:25	1 ml	507-18184
GLUT-1 Clone: polyclonal Host: Rabbit	✓	HU	Citrate or EDTA	Ready-to-use	-	16 ml	BRB049
GLUT-1 Clone: SP168 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	507-4681
						1 ml	507-4684
						0.5 ml	507-4682
						0.1 ml	507-4680
Glypican-3 Clone: 1G12 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG067
				Concentrate	1:100-1:500	0.5 ml	MSK067-05
Granzyme B Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	507-2581
				Concentrate	1:100	1 ml	507-2584
Growth Hormone, Human (hGH) Clone: polyclonal Host: Rabbit		HU, RT	Citrate	Ready-to-use	-	7 ml	507-17471
				Concentrate	1:200	1 ml	507-17474
						0.5 ml	507-17472
Heat Shock Protein 70 (HSP70) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	508-12331
				Concentrate	1:100	1 ml	508-12334
Helicobacter pylori Clone: polyclonal Host: Rabbit	✓	Helicobacter pylori	Citrate	Ready-to-use	-	16 ml	BRB032
						6 ml	RBG012
						1 ml	RBK012
						0.5 ml	RBK012-05



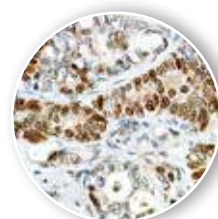
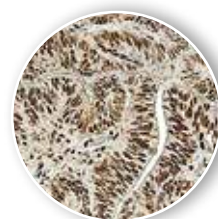
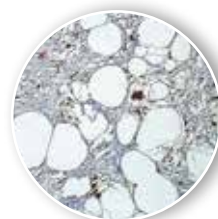
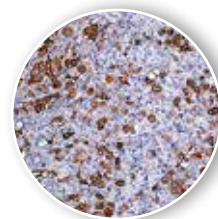
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
Hemoglobin Alpha Clone: EPR3608 Host: Rabbit	✓	HU	Citrate	Concentrate	100–1:500	0.5 ml	RBK035-05
HER2 (c-erbB-2) Intracellular domain Clone: CB11 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	16 ml	BMS014
						6 ml	MSG044
				Concentrate	1:50–1:200	1 ml	MSK044
						0.5 ml	MSK044-05
HER2 (c-erbB-2) Extracellular domain Clone: SP3 Host: Rabbit		HU	Citrate	Ready-to-use	-	6 ml	RBG026
						Concentrate	1:100–1:200
				0.5 ml	RBK026-05		
HER2 (c-erbB-2) Extracellular domain Clone: TAB250 Host: Mouse	✓	HU	Ficin	Ready-to-use	-	6 ml	MSG003
						Concentrate	1:100–1:200
				0.5 ml	MSK003-05		
HER2easy Kit (Complete kit for HER2 staining including antibody clone CB11, wash buffer, pre-treatment solution, HRP One-Step polymer, DAB) Clone: CB11 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	60 tests	ZUC063
HER3 (c-erbB-3) Clone: SP71 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 mL	508-3711
				Concentrate	1:100	1 mL	508-3714
HER4 (c-erbB-4) Clone: polyclonal Host: Rabbit		HU, MS	Citrate	Ready-to-use	-	7 ml	508-2761
				Concentrate	1:50	1 ml	508-2764
HGAL Clone: ZSHG Host: Mouse	✓	HU	Citrate or EDTA	Ready-to-use	-	6 ml	MSG088
				Concentrate	1:100–1:500	0.5 ml	MSK088-05
HHV-8 (Human Herpes Virus 8) Clone: 13B10 Host: Mouse	✓	Human Herpes Virus 8	EDTA or Citrate	Ready-to-use	-	6 ml	MSG085
				Concentrate	1:50–1:200	0.5 ml	MSK085-05
IgG4, Human Clone: ZSIGG4 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG084
				Concentrate	1:100–1:500	0.5 ml	MSK084-05
IKAROS Clone: SP108 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	509-4081
				Concentrate	1:100	1 ml	509-4084
Inhibin alpha Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	505-17391
				Concentrate	1:100	1 ml	505-17394
INI-1 Clone: ZS11 Host: Mouse	✓	HU	Citrate	Concentrate	1:50–1:200	0.5 ml	MSK078-05



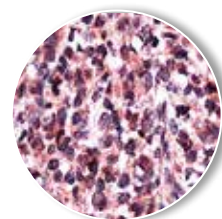
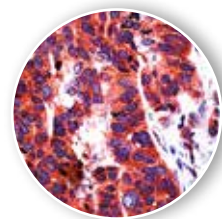
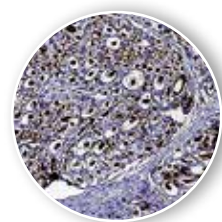
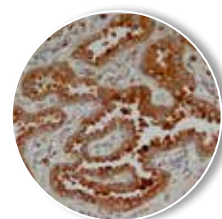
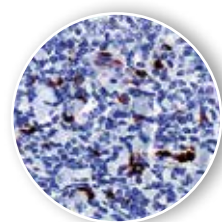
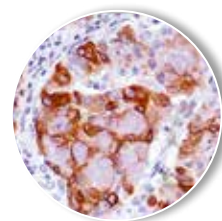
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
J-Chain Clone: SP105 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	510-4051
				Concentrate	1:100	1 ml	510-4054
Kappa Light Chain Clone: SPM508 Host: Mouse		HU	Citrate	Ready-to-use	-	7 ml	511-16521
				Concentrate	1:200	1 ml	511-16524
Kappa Light Chain Clone: SP148 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	511-4481
				Concentrate	1:100	1 ml	511-4484
						0.5 ml	511-4482
						0.1 ml	511-4480
Ki-67 Clone: SP6 Host: Rabbit	✓	HU, MS	Citrate	Ready-to-use	-	16 ml	BRB040
				Concentrate	1:200	6 ml	RBG027
						1 ml	RBK027
						0.5 ml	RBK027-05
Ksp-Cadherin Clone: ZSCA1 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG068
				Concentrate	1:100-1:200	1 ml	MSK068
						0.5 ml	MSK068-05
Lactogen, placental (hPL) Clone: polyclonal Host: Rabbit		HU	-	Ready-to-use	-	7 ml	516-2981
				Concentrate	1:250	1 ml	516-2984
Lambda Light Chain Clone: SP147 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	512-4471
				Concentrate	1:100	1 ml	512-4474
						0.5 ml	512-4472
						0.1 ml	512-4470
Lambda Light Chain Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	6 ml	612-0027
				Concentrate	1:10-1:40	1 ml	612-0026
LM02 Clone: 1A9-3D11 Host: Mouse		HU	Citrate	Ready-to-use	-	7 ml	512-17651
				Concentrate	1:100	1 ml	512-17654
Langerin Clone 12D6 Host Mouse	✓	HU	EDTA	Ready-to-use	-	6 ml	MSG103
				Concentrate	1:25-1:100	0.5 ml	MSK103-05
Luteinizing Hormone (LH) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	512-17481
				Concentrate	1:500	1 ml	512-17484
Lymphatic Endothelium Marker please see Podoplanin							
LYVE-1 Clone: polyclonal Host: Rabbit		HU	Citrate	Concentrate	1:50-1:100	0.5 ml	RBK014-05
MAdL (Marker for Adenocarcinomas of the Lung) Clone: MAdL Host: Mouse		HU	Pepsin	Concentrate	1:100-1:200	0.5 ml	MSK083-05



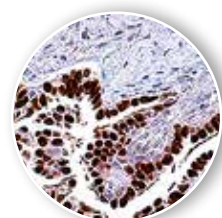
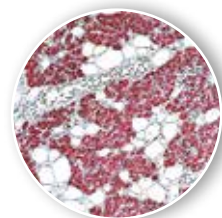
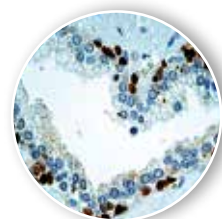
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
MAGE-1 Clone: polyclonal Host: Rabbit		HU	Citrate	Concentrate	1:200	7 ml	513-4501
						1 ml	513-4504
Mammaglobin Clone: 31A5 Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG022
				Concentrate	1:100 -1:500	0.5 ml	RBK022-05
Mammaglobin Clone: polyclonal Host: Rabbit		HU	Citrate	Concentrate	1:100 -1:200	0.5 ml	RBK007-05
MART-1 (Melan-A) Clone: M2-7C10 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG056
				Concentrate	1:100 -1:200	1 ml	MSK056
						0.5 ml	MSK056-05
MDM2 (Murine Double Minute 2) Clone: 4H309 Host: Mouse		HU	EDTA	Concentrate	1:100 -1:200	0.2 ml	113-0233
Melanoma (HMB45) Clone: HMB45 Host: Mouse	✓	HU, PG	optional: Citrate	Ready-to-use	-	16 ml	BMS010
						6 ml	MSG007
				Concentrate	1:50 -1:100	1 ml	MSK007
						0.5 ml	MSK007-05
Melanoma Associated Antigen KBA.62 Clone: KBA.62 Host: Mouse	✓	HU	EDTA	Ready-to-use	-	6 ml	MSG080
				Concentrate	1:25 -1:100	0.5 ml	MSK080-05
Melanoma Associated Antigen PNL2 Clone: PNL2 Host: Mouse	✓	HU	EDTA	Ready-to-use	-	6 ml	MSG082
				Concentrate	1:25 -1:100	0.5 ml	MSK082-05
Mesothelin Clone: SP74 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	513-3741
				Concentrate	1:100	1 ml	513-3744
MLH1 (concentrate including Antibody Diluent B) Clone: G168-15 Host: Mouse	✓	HU, MS	Citrate or EDTA	Ready-to-use	-	16 ml	BMS033
				Concentrate	1:25 -1:50	0.5 ml	MSK045-05
MMP-9 (Matrix Metalloproteinase 9, Gelatinase B) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	513-3661
				Concentrate	1:100	1 ml	513-3664
MSH2 Clone: FE11 Host: Mouse	✓	HU, MS	Citrate	Ready-to-use	-	16 ml	BMS034
						6 ml	MSG031
				Concentrate	1:25 -1:50	0.5 ml	MSK031-05
MSH6 Clone: SP93 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	513-3931
				Concentrate	1:100	1 ml	513-3934
MUC1 (Mucin 1, CD227) Clone: SPM492 Host: Mouse		HU	Citrate	Ready-to-use	-	7 ml	513-11191
				Concentrate	1:100	1 ml	513-11194



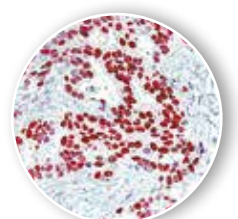
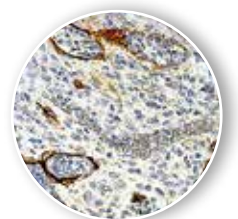
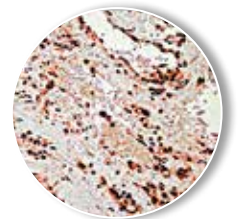
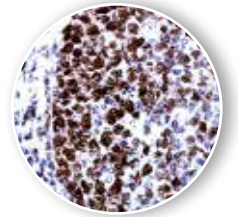
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MUC4 Clone: SP241 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	513-5411
				Concentrate	1:100	1 ml	513-5414
						0.5 ml	513-5412
						0.1 ml	513-5410
MUC5AC (Mucin 5AC) Clone: 45M1 Host: Mouse		HU, MS, RT, MO, PG	Citrate	Ready-to-use	-	7 ml	513-11081
				Concentrate	1:100	1 ml	513-11084
						0.5 ml	513-11082
						0.1 ml	513-11080
MUC18 (Mucin 18, CD146) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	513-11131
				Concentrate	1:50	1 ml	513-11134
Myeloperoxidase (MPO) Clone: SP72 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	513-3721
				Concentrate	1:100	1 ml	513-3724
Myoglobin Clone: polyclonal Host: Rabbit		HU	None	Ready-to-use	-	7 ml	513-2991
				Concentrate	1:200	1 ml	513-2994
Myosin SM Heavy Chain Clone: SMMS-1 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG081
				Concentrate	1:100-1:500	0.5 ml	MSK081-05
Napsin A Clone: BC15 Host: Rabbit	✓	HU, MS, RT, DG, SH	Citrate	Ready-to-use	-	6 ml	RBG059
				Concentrate	1:100-1:200	0.5 ml	RBK059-05
N-Cadherin Clone: SP90 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	503-3901
				Concentrate	1:100	1 ml	503-3904
						0.5 ml	503-3902
Nestin Clone: SP103 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	514-4031
				Concentrate	1:100	1 ml	514-4034
Neurofilament L & H (70/200kD) Clone: 2F11 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG060
				Concentrate	1:200	1 ml	MSK060
						0.5 ml	MSK060-05
Nkx 3.1 (NK-2 Family Homeodomain Transcription Factor) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	514-14101
				Concentrate	1:25	1 ml	514-14104
Notch-1 Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	514-10861
				Concentrate	1:200	1 ml	514-10864
NSE (Neuron Specific Enolase) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	514-3301
				Concentrate	1:300	1 ml	514-3304
Oct-2 (Octamer Binding Transcription Factor 2) Clone: ZS02 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG073
				Concentrate	1:100-1:200	0.5 ml	MSK073-05
Oct-3/Oct-4 (Octamer Binding Transcription Factor 3/4) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	515-18281
				Concentrate	1:50	1 ml	515-18284



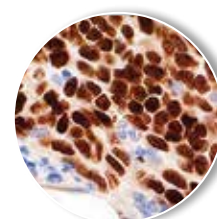
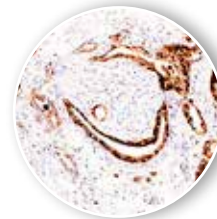
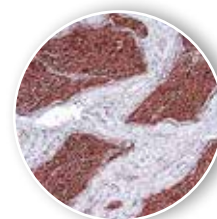
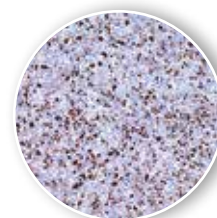
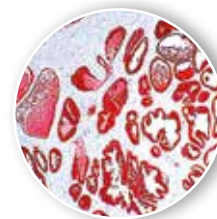
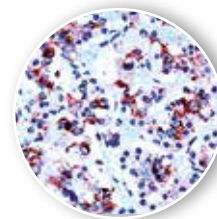
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Oct-4 (Octamer-binding Transcription Factor 4) Clone: polyclonal Host: Rabbit		HU	Citrate	Concentrate	1:50–1:100	0.5 ml	RBK017-05
p40 Clone: BC28 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	16 ml	BMS050
						6 ml	MSG097
				Concentrate	1:50-1:100	1 ml	MSK097
						0.5 ml	MSK097-05
p40 Clone: polyclonal Host: Rabbit	✓	HU	Citrate or EDTA	Ready-to-use	-	6 ml	RBG054
				Concentrate	1:50–1:200	0.5 ml	RBK054-05
p53 Clone: BP53-12 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG020
				Concentrate	1:100–1:200	1 ml	MSK020
						0.5 ml	MSK020-05
p63 Clone: 4A4 Host: Mouse		HU	Citrate	Ready-to-use	-	16 ml	BMS052
				Concentrate	1:50–1:75	1 ml	MSK087
						0.5 ml	MSK087-05
p120 please see Catenin (delta) p120							
P504S (AMACR) Clone: polyclonal Host: Rabbit		HU	EDTA	Ready-to-use	-	16 ml	BRB035
						6 ml	RBG002
				Concentrate	1:50–1:100	1 ml	RBK002
						0.5 ml	RBK002-05
pan Basal-Cell Cocktail (p63 & Cytokeratin 5/14) Clone: 4A4 & XM26 + LL002 Host: Mouse		HU	Citrate	Ready-to-use	-	16 ml	BMS051
						6 ml	COG005
				Concentrate	1:50	1 ml	CO005K
						0.5 ml	CO005K-05
pan B-Cell Cocktail (CD20 & PAX-5) Clone: L26 + polyclonal Host: Mouse & Rabbit		HU	Citrate or EDTA	Ready-to-use	-	16 ml	BMS026
						6 ml	COG002
				Concentrate	1:50	1 ml	CO002K
						0.5 ml	CO002K-05
Parathyroid Hormone (PTH) Clone: ZSPT Host: Mouse	✓	HU	optional: Citrate	Ready-to-use	-	6 ml	MSG072
				Concentrate	1:100–1:200	1 ml	MSK072
						0.5 ml	MSK072-05
PAX-2 Clone: polyclonal Host: Rabbit		HU	Citrate	Concentrate	1:20–1:40	0.5 ml	RBK013-05
PAX-5 Clone: polyclonal Host: Rabbit	✓	HU, MS, RT	Citrate	Ready-to-use	-	16 ml	BRB027
						6 ml	RBG008
				Concentrate	1:100–1:200	1 ml	RBK008
						0.5 ml	RBK008-05
PAX-8 Clone: polyclonal Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG047
				Concentrate	1:25–1:50	0.5 ml	RBK047-05



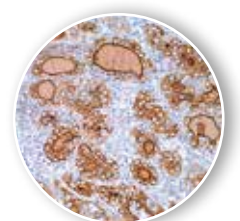
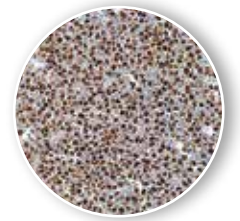
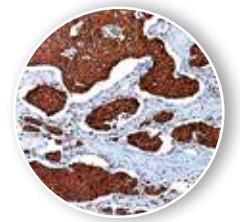
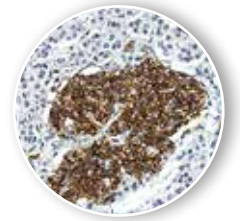
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
Paxillin Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	516-13871
				Concentrate	1:50	1 ml	516-13874
PCNA (Proliferating Cell Nuclear Antigen) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	516-2851
				Concentrate	1:200	1 ml	516-2854
PD-1 Clone: polyclonal Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	516-18661
				Concentrate	1:100	1 ml	516-18664
						0.5 ml	516-18662
0.1 ml	516-18660						
PDGFr alpha (Platelet Derived Growth Factor Receptor Alpha, CD140a) Clone: polyclonal Host: Rabbit		HU, MS	Citrate	Ready-to-use	-	7 ml	516-2691
				Concentrate	1:50	1 ml	516-2694
PIN Cocktail (P504S & p63) Clone: polyclonal + 4A4 Host: Rabbit & Mouse		HU	Citrate or EDTA	Ready-to-use	-	6 ml	COG001
				Concentrate	1:50	1 ml	CO001K
						0.5 ml	CO001K-05
PLAP (Placental Alkaline Phosphatase) Clone: SP15 Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG056
				Concentrate	1:50-1:100	1 ml	RBK056
						0.5 ml	RBK056-05
PMS2 Clone: A16-4 Host: Mouse		HU, MS	Citrate	Concentrate	1:100-1:200	0.5 ml	MSK064-05
PMS2 Clone: EPR3947 Host: Rabbit	✓	HU	EDTA	Ready-to-use	-	6 ml	RBG048
Podoplanin Clone: D2-40 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG057
				Concentrate	1:50-1:100	1 ml	MSK057
						0.5 ml	MSK057-05
Progesterone Receptor Clone: PR-1 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG002
				Concentrate	1:50-1:200	1 ml	MSK002
						0.5 ml	MSK002-05
Progesterone Receptor Clone: SP42 Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	16 ml	BRB038
						6 ml	RBG020
				Concentrate	1:200-1:400	1 ml	RBK020
						0.5 ml	RBK020-05
Prohibitin Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	516-17751
				Concentrate	1:100	1 ml	516-17754



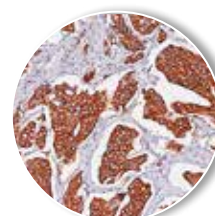
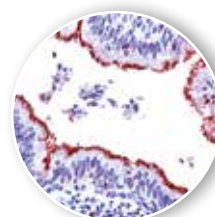
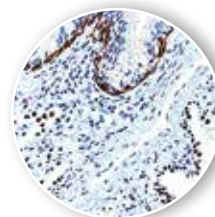
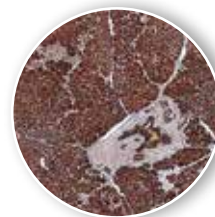
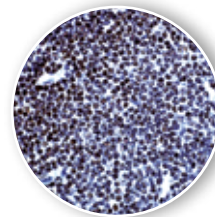
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
Prolactin (LTH) Clone: polyclonal Host: Rabbit		HU, RT	Citrate	Ready-to-use	-	7 ml	516-17491
				Concentrate	1:200	1 ml	516-17494
Protein Gene Product 9.5 (PGP9.5) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	516-3341
				Concentrate	1:200	1 ml	516-3344
PSA (Prostate Specific Antigen) Clone: ER-PR8 Host: Mouse		HU	Citrate	Ready-to-use	-	6 ml	MSG051
				Concentrate	1:50	1 ml	MSK051
							0.5 ml
PsCA (Prostate Stem Cell Antigen) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	516-3291
				Concentrate	1:75	1 ml	516-3294
PSMA (Prostate Specific Membrane Antigen) Clone: SP29 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	517-3291
				Concentrate	1:100	1 ml	517-3294
PU.1 Clone: EPR3158Y Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG042
				Concentrate	1:50-1:200	0.5 ml	RBK042-05
Renal Cell Carcinoma (gp200) Clone: SPM487 Host: Mouse		HU	Enzymatic	Ready-to-use	-	7 ml	518-11051
				Concentrate	1:25-1:50	1 ml	518-11054
Retinoblastoma (Rb) Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	518-4311
				Concentrate	1:100	1 ml	518-4314
S100 Clone: 4C4.9 Host: Mouse	✓	HU, MS, RT, BV	optional: Citrate	Ready-to-use	-	16 ml	BMS013
						6 ml	MSG050
						Concentrate	1:200-1:400
0.5 ml	MSK050-05						
S100A4 Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	519-4441
				Concentrate	1:100	1 ml	519-4444
S100P (placental S100) Clone: 16/f5 Host: Mouse	✓	HU	Citrate or EDTA	Ready-to-use	-	6 ml	MSG089
				Concentrate	1:100-1:500	0.5 ml	MSK089-05
SALL4 Clone: monoclonal Host: Mouse		HU	Citrate	Concentrate	1:100-1:200	0.5 ml	MSK079-05
SATB2 Clone: SATBA4B10 Host: Mouse		HU, MS, RT	EDTA	Concentrate	1:50-1:100	0.5 ml	MSK101-05
Serotonin Clone: polyclonal Host: Rabbit		HU	None	Concentrate	1:10-1:40	1 ml	619-0078
SOX-2 Clone: SP76 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	519-3761
				Concentrate	1:100	1 ml	519-3764
SOX-10 Clone: polyclonal Host: Rabbit	✓	HU	EDTA	Ready-to-use	-	6 ml	RBG057
				Concentrate	1:25-1:100	0.5 ml	RBK057-05



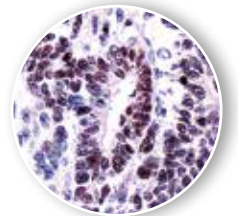
Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
SOX-11 Clone: ZSX11 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG095
				Concentrate	1:25 -1:100	0.5 ml	MSK095-05
SSTR2A Somatostatin Receptor 2A Clone: polyclonal Host: Rabbit		HU, MS, RT	EDTA	Concentrate	1:100	0.5 ml	RBK046-05
SSTR5 Somatostatin Receptor 5 Clone: polyclonal Host: Rabbit		HU	Citrate	Concentrate	1:100	0.5 ml	RBK051-05
STAT6 Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	519-4291
				Concentrate	1:75	1 ml	519-4294
Stathmin Clone: SP49 Host: Rabbit		HU, MS	Citrate	Ready-to-use	-	7 ml	519-3491
						1 ml	519-3494
				Concentrate	1:100	0.5 ml	519-3492
						0.1 ml	519-3490
Survivin Clone: SP79 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	519-3791
				Concentrate	1:100	1 ml	519-3794
Synaptophysin Clone: polyclonal Host: Rabbit	✓	HU	Citrate	Ready-to-use	-	6 ml	RBG011
				Concentrate	1:200 -1:400	1 ml	RBK011
						0.5 ml	RBK011-05
Synuclein (Pan) Clone: polyclonal Host: Rabbit		HU, RT	Citrate	Ready-to-use	-	7 ml	519-2791
				Concentrate	1:50	1 ml	519-2794
TAU Clone: SP70 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	520-3701
				Concentrate	1:100	1 ml	520-3704
T-bet Clone: ZSTB Host: Rabbit	✓	HU	EDTA	Ready-to-use	-	6 ml	RBG049
				Concentrate	1:100 -1:500	0.5 ml	RBK049-05
TdT (Terminal Deoxynucleotidyl Transferase) Clone: polyclonal Host: Rabbit	✓	HU	EDTA	Ready-to-use	-	6 ml	RBG052
				Concentrate	1:100 -1:500	1 ml	RBK052
						0.5 ml	RBK052-05
TGF beta II (Transforming Growth Factor) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	520-18021
				Concentrate	1:100	1 ml	520-18024
						0.5 ml	520-18022
Thymidylate Synthase (TS) Clone: SP112 Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	520-4121
				Concentrate	1:100	1 ml	520-4124
Thyroglobulin Clone: 2H11 + 6E1 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG039
				Concentrate	1:100 -1:200	1 ml	MSK039
						0.5 ml	MSK039-05
Topoisomerase I Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	520-18861
				Concentrate	1:100	1 ml	520-18864



Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
Topoisomerase II (beta) Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	520-4141
				Concentrate	1:200	1 ml	520-4144
Toxoplasma gondii Clone: polyclonal Host: Rabbit		Toxoplasma gondii	EDTA	Concentrate	1:10-1:30	0.5 ml	RBK060-05
Treponema pallidum Clone: polyclonal Host: Rabbit		Treponema pallidum	Citrate	Concentrate	-	1 ml	620-0262
Trypsin (Human pancreatic) Clone: polyclonal Host: Rabbit		HU	Pepsin	Concentrate	1:50-1:200	0.2 ml	RBK055-02
TSH (Thyroid Stimulating Hormone) Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	520-17501
				Concentrate	1:200	1 ml	520-17504
TTF-1 (Thyroid Transcription Factor 1) Clone: 8G7G3/1 Host: Mouse	✓	HU, RT	Citrate	Ready-to-use	-	16 ml	BMS016
						6 ml	MSG004
				Concentrate	1:200-1:500	1 ml	MSK004
						0.5 ml	MSK004-05
TTF-1 & Cytokeratin 5/6 Cocktail Clone: 8G7G3/1 + D5/16B4 Host: Mouse		HU	Citrate	Ready-to-use	-	6 ml	COG004
						1 ml	CO004K
				Concentrate	1:50	0.5 ml	CO004K-05
Tubulin alpha Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	520-4131
				Concentrate	1:200	1 ml	520-4134
Tubulin beta Clone: polyclonal Host: Rabbit		HU, MS, RT	None	Ready-to-use	-	7 ml	520-3811
				Concentrate	1:200	1 ml	520-3814
Ubiquitin Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	521-3351
				Concentrate	1:100	1 ml	521-3354
Uroplakin II Clone: BC21 Host: Mouse	✓	HU	Citrate	Ready-to-use	-	6 ml	MSG102
				Concentrate	1:50-1:100	0.5 ml	MSK102-05
Uroplakin III Clone: AU1 Host: Mouse		HU, RT, BV, PG	Citrate or enzymatic	Concentrate	1:25-1:50	0.5 ml	MSK052-05
VEGF-A (Vascular Endothelial Growth Factor) Clone: polyclonal Host: Rabbit		HU	EDTA	Ready-to-use	-	7 ml	522-2611
				Concentrate	1:100	1 ml	522-2614
VEGFR-1 (Flt-1) Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	506-2801
				Concentrate	1:100	1 ml	506-2804



Description	CE/IVD	Species Reactivity	Pre-treatment	Format	Dilution	Volume	Cat. No.
Villin Clone: SP145 Host: Rabbit		HU, BV, CK, MS, PG	Citrate	Ready-to-use	-	7 ml	522-4451
				Concentrate	1:100	1 ml	522-4454
						0.5 ml	522-4452
						0.1 ml	522-4450
Vimentin Clone: V9 Host: Mouse	✓	HU, MS, RT, DG, PG	optional: Citrate	Ready-to-use	-	16 ml	BMS012
				Concentrate	1:100-1:200	6 ml	MSG023
						1 ml	MSK023
						0.5 ml	MSK023-05
Vinculin Clone: SP117 Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	522-4171
				Concentrate	1:100	0.5 ml	522-4172
WT1 (Wilm's Tumor Protein-1) Clone: polyclonal Host: Rabbit		HU, MS, RT	Citrate	Ready-to-use	-	7 ml	523-3991
				Concentrate	1:100	1 ml	523-3994
ZAP-70 Clone: polyclonal Host: Rabbit		HU	Citrate	Ready-to-use	-	7 ml	526-12521
				Concentrate	1:100	1 ml	526-12524



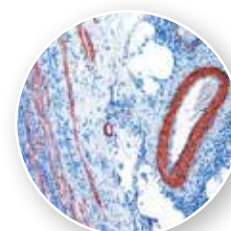
MAX-Line Antibodies

Cost-effective 16 ml ready-to-use antibodies for routine immunohistochemistry

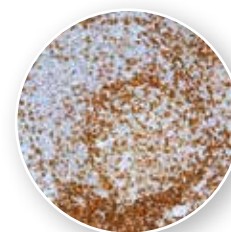
Zytomed Systems offers convenient high-volume ready-to-use antibodies suitable for FFPE tissue sections. These *MAX-Line* antibodies meet your demands concerning costs, quality and suitability for routine. All these antibodies (except the 4 marked ones) are CE/IVD certified.

► MAX-Line antibodies

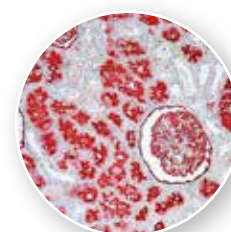
Description	Host	Clone	Pre-treatment	Volume	Cat. No.
Actin alpha (Smooth Muscle)	Mouse	1A4	None	16 ml	BMS001
Bcl-2	Mouse	Bcl-2-100	Citrate	16 ml	BMS021
Calretinin	Rabbit	polyclonal	Citrate	16 ml	BRB022
CD3 (T-Cell)	Rabbit	SP7	Citrate	16 ml	BRB041
CD4 (T-Cell helper/inducer)	Rabbit	SP35	Citrate	16 ml	BRB042
CD8 (T-Cell cytotoxic/suppressor)	Rabbit	SP16	Citrate	16 ml	BRB036
CD10 (CALLA)	Mouse	56C6	Citrate	16 ml	BMS043
CD20 (B-Cell)	Mouse	L26	optional: Citrate	16 ml	BMS003
CD31	Mouse	JC70	Citrate	16 ml	BMS044
CD34	Mouse	QBEnd/10	optional: Citrate	16 ml	BMS045
CD45 (LCA)	Mouse	PD7/26 + 2B11	optional: Citrate	16 ml	BMS046
CD56	Rabbit	RCD56	EDTA	16 ml	BRB039
CD79a	Mouse	JCB117	Citrate	16 ml	BMS005
CDX-2	Rabbit	EPR2764Y	Citrate	16 ml	BRB028
CEA	Mouse	Col-1	None	16 ml	BMS029
Chromogranin A	Mouse	LKH2H10	None	16 ml	BMS018
Cytokeratin 5/6	Mouse	D5/16B4	Citrate	16 ml	BMS017
Cytokeratin 5/14	Mouse	XM26 + LL002	Citrate	16 ml	BMS023
Cytokeratin 7	Mouse	OV-TL 12/30	Citrate or enzymatic	16 ml	BMS030
Cytokeratin 20	Mouse	Ks20.8	Pepsin or Trypsin	16 ml	BMS037



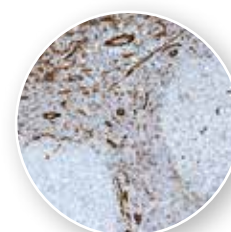
Actin SM (BMS001)
Appendix



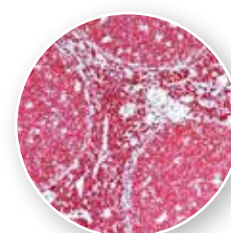
CD4 (BRB042) Tonsil



CD10 (BMS043) Kidney




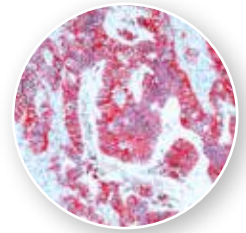
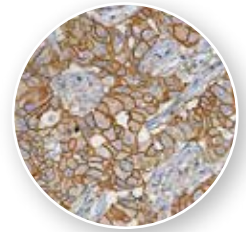
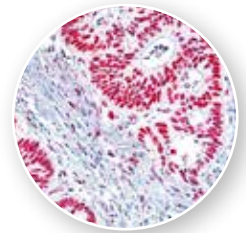
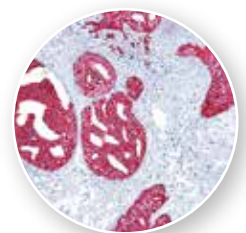
CD31 (BMS044) Tonsil



CD45 (BMS046) Tonsil

► MAX-Line antibodies (continued)

Description	Host	Clone	Pre-treatment	Volume	Cat. No.
Cytokeratin (HMW)	Mouse	34βE12	Citrate or Pepsin	16 ml	BMS015
Cytokeratin (Pan)	Mouse	AE1 + AE3	Citrate or Pepsin	16 ml	BMS006
Desmin	Mouse	D33	Citrate	16 ml	BMS007
E-Cadherin	Rabbit	EP700Y	Citrate	16 ml	BRB047
Epithelial Specific Antigen (ESA, Ep-CAM)	Mouse	Ber-EP4	Citrate or enzymatic	16 ml	BMS048
Estrogen Receptor	Mouse	1D5	Citrate	16 ml	BMS008
Estrogen Receptor 	Rabbit	SP1	Citrate	16 ml	BRB053
GLUT-1	Rabbit	polyclonal	Citrate or EDTA	16 ml	BRB049
Helicobacter pylori	Rabbit	polyclonal	Citrate	16 ml	BRB032
HER2 (c-erbB-2)	Mouse	CB11	Citrate	16 ml	BMS014
Ki-67	Rabbit	SP6	Citrate	16 ml	BRB040
Melanoma (HMB45)	Mouse	HMB45	optional: Citrate	16 ml	BMS010
MLH-1	Mouse	G168-15	Citrate	16 ml	BMS033
MSH-2	Mouse	FE11	Citrate	16 ml	BMS034
p40	Mouse	BC28	Citrate	16 ml	BMS050
p63*	Mouse	4A4	Citrate or EDTA	16 ml	BMS052
P504S*	Rabbit	polyclonal	EDTA	16 ml	BRB035
pan Basal Cell Cocktail* (p63 & Cytokeratin 5/14)	Mouse	4A4 + XM26 + LL002	Citrate	16 ml	BMS051
pan B-Cocktail* (CD20 & Pax-5)	Mouse + Rabbit	L26 + polyclonal	Citrate or EDTA	16 ml	BMS026
Pax-5	Rabbit	polyclonal	Citrate	16 ml	BRB027
Progesterone Receptor	Rabbit	SP42	Citrate	16 ml	BRB038
S100	Mouse	4C4.9	None	16 ml	BMS013
TTF-1	Mouse	8G7G3/1	Citrate	16 ml	BMS016
Vimentin	Mouse	V9	optional: Citrate	16 ml	BMS012

Ep-CAM (BMS048)
Colon carcinomaHER2 (BMS014)
Breast carcinomaMSH2 (BMS034)
Colon carcinomap40 (BMS050)
Prostate carcinomaP504S (BRB035)
Prostate carcinoma

* for research use only

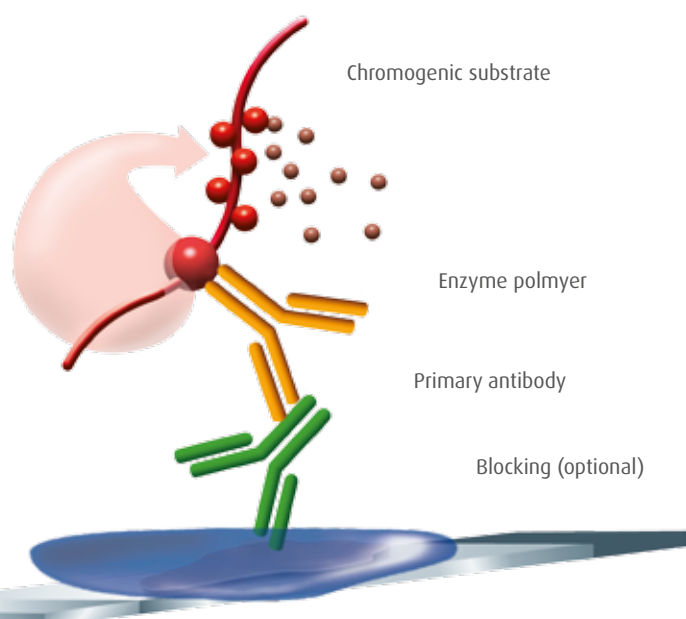
Detection

Detection Systems

ZytoChem Plus detection systems are characterised by outstanding sensitivity and can be used in automated as well as manual immunohistochemistry. You can choose between polymer systems, which provide highest sensitivity, and high-sensitive streptavidin-biotin systems. Both kit systems are available with horse-radish peroxidase (HRP) or alkaline phosphatase (AP). They match perfectly with our chromogenic substrates for aqueous and permanent mounting. All ZytoChem Plus detection kits and reagents are CE/IVD certified except the Double Stain Polymer kits which are labelled for research use only.

ZytoChem Plus Polymer Detection Systems

Principle of polymer detection systems



ZytoChem Plus Polymer Detection

- ▶ Biotin-free technique avoids problems due to endogenous biotin
- ▶ Compact polymers ensure highest sensitivity
- ▶ Horse Radish Peroxidase (HRP) as well as Alkaline Phosphatase (AP) reagents available
- ▶ Choose between One-Step or Two-Step polymers
- ▶ Reagents and kits for detection of mouse, rabbit and rat primary antibodies or species-specific
- ▶ Single reagents perfect for double staining
- ▶ Suitable for manual as well as automated immunohistochemistry
- ▶ All kits and reagents CE/IVD certified

▶ HRP Polymer Detection Reagents

Description	CE/IVD	Components	Volume	Cat. No.
ZytoChem Plus (HRP) Polymer Kit anti-Mouse/Rabbit	✓	Ready-to-use Protein Block, Post Block, HRP-Polymer	1 Kit (6 ml/60 tests)	POLHRP-006
			1 Kit (100 ml/1000 tests)	POLHRP-100
ZytoChem Plus (HRP) One-Step Polymer anti-Mouse/Rabbit/Rat	✓	Ready-to-use HRP Polymer	6 ml/60 tests	ZUC053-006
			100 ml/1000 tests	ZUC053-100
ZytoChem Plus (HRP) Polymer anti-Mouse	✓	Ready-to-use HRP Polymer	6 ml/60 tests	ZUC050-006
			100 ml/1000 tests	ZUC050-100
ZytoChem Plus (HRP) Polymer anti-Rabbit	✓	Ready-to-use HRP Polymer	6 ml/60 tests	ZUC032-006
			100 ml/1000 tests	ZUC032-100

▶ AP Polymer Detection Reagents

Description	CE/IVD	Components	Volume	Cat. No.
ZytoChem Plus (AP) Polymer Kit anti-Mouse/Rabbit	✓	Ready-to-use Protein Block, Post Block, AP-Polymer	1 Kit (6 ml/60 tests)	POLAP-006
			1 Kit (100 ml/1000 tests)	POLAP-100
ZytoChem Fast (AP) One-Step Polymer anti-Mouse/Rabbit/Rat	✓	Ready-to-use AP Polymer	6 ml/60 tests	ZUC068-006
			100 ml/1000 tests	ZUC068-100
ZytoChem Plus (AP) Polymer anti-Rabbit	✓	Ready-to-use AP Polymer	6 ml/60 tests	ZUC031-006
ZytoChemPlus (AP) Polymer anti-Mouse	✓	Ready-to-use AP Polymer	6 ml / 60 tests	ZUC077-006
			100 ml / 1000 tests	ZUC077-100

▶ Double Stain Polymer Detection kits

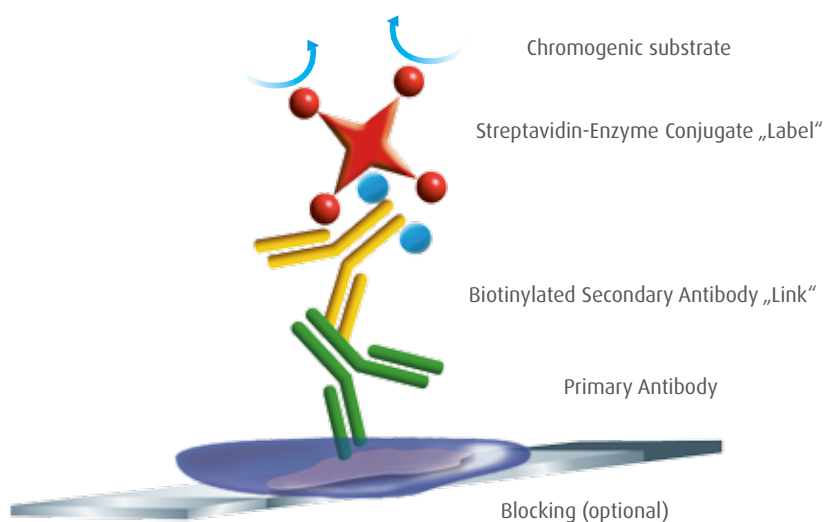
The ZytoChem Plus Double Stain kits were especially developed for immunohistochemical double staining. One primary antibody must be obtained from mouse, the other one from rabbit. Zytomed Systems offers one double stain kit for sequential detection (POL2DS) and one kit for simultaneous detection (POLDS). Both kits are labelled for research use only.

Description	Components	Volume	Cat. No.
ZytoChem Plus Double Stain Polymer Kit*	HRP Polymer anti-Mouse (50 X Concentrate), AP Polymer anti Rabbit (Ready-to-use)	1 Kit (6 ml/60 tests)	POLDS-006
		1 Kit (100 ml / 1000 Tests)	POLDS-100
ZytoChemPlus 2-Step Double Stain Polymer Kit*	AP-polymer anti-rabbit, HRP-polymer anti-mouse (both ready-to-use)	1 Kit (2 x 6 ml / 60 Tests)	POL2DS-006
		1 Kit (2 x 100 ml / 1000 Tests)	POL2DS-100

* for research use only

ZytoChem Plus Streptavidin-Biotin Detection Systems

Principle of streptavidin-biotin detection systems



ZytoChem Plus Streptavidin-Biotin Detection

- ▶ Streptavidin-Biotin technique ensures high sensitivity
- ▶ Horse Radish Peroxidase (HRP) as well as Alkaline Phosphatase (AP) reagents available
- ▶ Kit sizes available from small complete kits up to high-volume bulk kits
- ▶ Broad-Spectrum kits as well as species-specific kits available
- ▶ Suitable for manual as well as automated immunohistochemistry
- ▶ All kits and reagents CE/IVD certified

▶ HRP Streptavidin-Biotin Detection Reagents

Description	CE/IVD	Components	Volume	Cat. No.
ZytoChem Plus (HRP) Broad Spectrum (AEC) Kit	✓	Peroxide Block, Protein Block, Sec. Antibody anti-Mouse/Rabbit/Rat/Guinea pig, HRP-conjugate, 2 component AEC	1 Kit (8 ml/80 tests)	HRP008AEC

► HRP Streptavidin-Biotin Detection Reagents (continued)

Description	CE/IVD	Components	Volume	Cat. No.
ZytoChem Plus (HRP) Broad Spectrum (DAB) Kit	✓	Peroxide Block, Protein Block, Sec. Antibody anti-Mouse/Rabbit/Rat/Guinea pig, HRP-conjugate, 2 component DAB	1 Kit (8 ml/80 tests)	HRP008DAB
ZytoChem Plus (HRP) Broad Spectrum Kit	✓	Protein Block, Sec. Antibody anti-Mouse/Rabbit/Rat/Guinea pig, HRP-conjugate	1 Kit (60 ml/600 tests)	HRP060
			1 Kit (125 ml/1250 tests)	HRP125
			1 Kit (500 ml/5000 tests)	HRP500
ZytoChem Plus (HRP) Anti-Mouse (AEC) Kit	✓	Peroxide Block, Protein Block, Sec. Antibody anti-Mouse, HRP-conjugate, 2 component AEC	1 Kit (8 ml/80 tests)	HRP008AEC-MS
ZytoChem Plus (HRP) Anti-Mouse (DAB) Kit	✓	Peroxide Block, Protein Block, Sec. Antibody anti-Mouse, HRP-conjugate, 2 component DAB	1 Kit (8 ml/80 tests)	HRP008DAB-MS
ZytoChem Plus (HRP) Anti-Mouse Kit	✓	Protein Block, Sec. Antibody anti-Mouse, HRP-conjugate	1 Kit (60 ml/600 tests)	HRP060-MS
			1 Kit (125 ml/1250 tests)	HRP125-MS
			1 Kit (500 ml/5000 tests)	HRP500-MS
ZytoChem Plus (HRP) Anti-Rabbit (AEC) Kit	✓	Peroxide Block, Protein Block, Sec. Antibody anti-Rabbit, HRP-conjugate, 2 component AEC	1 Kit (8 ml/80 tests)	HRP008AEC-RB
ZytoChem Plus (HRP) Anti-Rabbit (DAB) Kit	✓	Peroxide Block, Protein Block, Sec. Antibody anti-Rabbit, HRP-conjugate, 2 component DAB	1 Kit (8 ml/80 tests)	HRP008DAB-RB
ZytoChem Plus (HRP) Anti-Rabbit Kit	✓	Protein Block, Sec. Antibody anti-Rabbit, HRP-conjugate	1 Kit (60 ml/600 tests)	HRP060-RB
			1 Kit (125 ml/1250 tests)	HRP125-RB
			1 Kit (500 ml/5000 tests)	HRP500-RB

► AP Streptavidin-Biotin Detection Reagents

Description	CE/IVD	Components	Volume	Cat. No.
ZytoChem Plus (AP) Broad Spectrum (Fast Red) Kit	✓	Protein Block, Sec. Antibody anti-Mouse/Rabbit/Rat/Guinea pig, AP-conjugate, 2 component Fast Red	1 Kit (8 ml/80 tests)	AP008RED
ZytoChem Plus (AP) Broad Spectrum Kit	✓	Protein Block, Sec. Antibody anti-Mouse/Rabbit/Rat/Guinea pig, AP-conjugate	1 Kit (60 ml/600 tests)	AP060
			1 Kit (125 ml/1250 tests)	AP125
			1 Kit (500 ml/5000 tests)	AP500
ZytoChem Plus (AP) Anti-Mouse (Fast Red) Kit	✓	Protein Block, Sec. Antibody anti-Mouse, AP-conjugate, 2 component Fast Red	1 Kit (8 ml/80 tests)	AP008RED-MS
ZytoChem Plus (AP) Anti-Mouse Kit	✓	Protein Block, Sec. Antibody anti-Mouse, AP-conjugate	1 Kit (60 ml/600 tests)	AP060-MS
			1 Kit (125 ml/1250 tests)	AP125-MS
			1 Kit (500 ml/5000 tests)	AP500-MS
ZytoChem Plus (AP) Anti-Rabbit (Fast Red) Kit	✓	Protein Block, Sec. Antibody anti-Rabbit, AP-conjugate, 2 component Fast Red	1 Kit (8 ml/80 tests)	AP008RED-RB
ZytoChem Plus (AP) Anti-Rabbit Kit	✓	Protein Block, Sec. Antibody anti-Rabbit, AP-conjugate	1 Kit (60 ml/600 tests)	AP060-RB
			1 Kit (125 ml/1250 tests)	AP125-RB
			1 Kit (500 ml/5000 tests)	AP500-RB

Reagents

Ancillary Reagents

A broad range of ancillary reagents like buffers, chromogenic substrates and reagents for pre-treatment are available from Zytomed Systems, many of them CE/IVD certified.

Epitope retrieval

Zytomed Systems offers different reagents for enzymatic and heat pre-treatment (HIER). The correct epitope retrieval depends on the used antibody clone. Buffer solutions of higher pH value (8 or 9) often lead to stronger signal intensity compared to buffer of pH 7 when used in heat induced epitope retrieval.

Our new OmniPrep Solutions allow a convenient simultaneous dewaxing and heat pre-treatment in just one step.



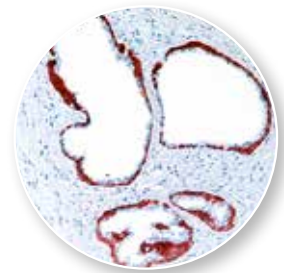
Cytokeratin 5&6 (MSK034) staining after dewaxing and epitope retrieval with OmniPrep Solution



ER (MSK001) staining after dewaxing and epitope retrieval with OmniPrep Solution



Cytokeratin 5&6 (MSK034) on prostate with HIER in Citrate Buffer pH 6.0



Cytokeratin 5&6 (MSK034) on prostate with HIER in T-EDTA Buffer pH 9.0

► Dewaxing and heat pre-treatment combined

Description	CE/IVD	Volume	Cat. No.
OmniPrep Solution pH 9.0 (10 X)		100 ml	ZUC067-100
		500 ml	ZUC067-500
OmniPrep Solution pH 9.0 (100 X)		500 ml	ZUC078-500
OmniPrep Solution pH 6.0 (10 X) 		100 ml	ZUC079-100
		500 ml	ZUC079-500

► HIER (Heat Induced Epitope Retrieval)

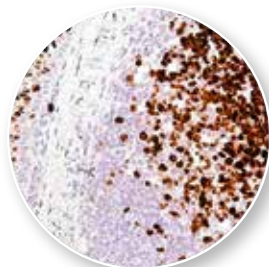
Description	CE/IVD	Volume	Cat. No.
Zytomed Systems HIER Citrate Buffer pH 6.0 (10 X)	✓	100 ml	ZUC028-100
		500 ml	ZUC028-500
Zytomed Systems HIER EDTA Buffer pH 8.0 (10 X)	✓	100 ml	ZUC040-100
		500 ml	ZUC040-500
Zytomed Systems HIER T-EDTA Buffer pH 9.0 (10 X)	✓	100 ml	ZUC029-100
		500 ml	ZUC029-500

► Proteolytic Pre-treatment

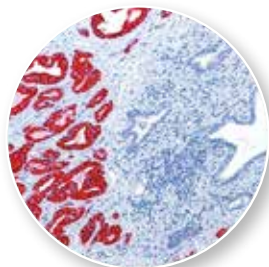
Description	CE/IVD	Volume	Cat. No.
Pepsin (Ready-to-use)	✓	60 ml	ZUC038-060
Pronase (Ready-to-use)		250 ml	ZY0008
Proteinase K (Ready-to-use)		15 ml	ZY0007
		50 ml	ZY0009
Trypsin Pretreatment Kit (2 components)		155 ml	ZUC043-155
Ficin (Ready-to-use)		50 ml	ZUC039-050

Chromogenic substrates

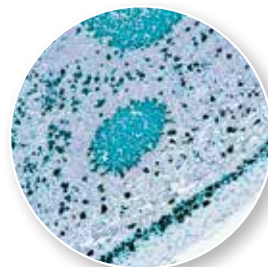
Zytomed Systems offers three chromogenic substrates for permanent mounting: Permanent AP Red for AP systems and Permanent AEC as well as Permanent HRP Green for HRP systems. All three chromogenic substrates can be mounted with a permanent mounting medium after dehydration in ethanol and clearing in xylene. In addition Zytomed Systems offers well-established DAB and AEC for use in combination with horse radish peroxidase (HRP) detection systems and Fast Red for alkaline phosphatase based (AP) detection systems.



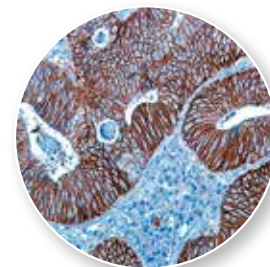
Tonsil stained with Ki67 (RBK027), HRP and Permanent AEC (ZUC054-200)



Prostate carcinoma stained with P504S (RBG002), AP and Permanent AP Red Kit (ZUC001)



Tonsil stained with Ki-67 (RBK027), HRP and Permanent HRP Green (ZUC070-100)



Stomach carcinoma stained with HER2 (RBK026), HRP and DAB (DAB530)

► Chromogenic substrates for Peroxidase

Description	CE/IVD	Volume	Cat. No.
DAB Substrate Kit (2 components; for permanent mounting)	✓	50 ml	DAB057
		500 ml	DAB530
DAB High contrast Kit (2 components; for permanent mounting)	✓	50 ml	DAB500plus
		500 ml	DAB5000plus
Permanent AEC Kit (4 components; for permanent mounting)		200 ml	ZUC054-200
Permanent HRP Green Kit (2 components; for permanent mounting)		100 ml	ZUC070-100
AEC Single Solution (Ready-to-use; for aqueous mounting)	✓	8 ml	ZUC037-008
		100 ml	ZUC037-100
AEC Substrate Kit (2 components; for aqueous mounting)	✓	50 ml	ZUC042-050
		500 ml	ZUC042-500

► Chromogenic substrates for Alkaline Phosphatase

Description	CE/IVD	Volume	Cat. No.
Permanent AP Red Kit (2 components; for permanent mounting)	✓	125 ml	ZUC001-125
		500 ml	ZUC001-500
Fast Red Substrate Pack (tablets and buffer; for aqueous mounting)	✓	55 ml	RED055
		125 ml	RED125
		500 ml	RED500

Diluents, buffers and miscellaneous

In this table you will find buffers, reagents and products for use in immunohistochemistry. Many of these reagents can be used in manual as well as in automated IHC.

► Diluents, buffers and miscellaneous

Description	CE/IVD	Volume	Cat. No.
Antibody Diluent (Ready-to-use)	✓	100 ml	ZUC025-100
		500 ml	ZUC025-500
Antibody Diluent B (Ready-to-use; special diluent recommended for anti-MLH-1 and certain other specificities)	✓	25 ml	ZUC051-025
		100 ml	ZUC051-100
Peroxide Block (Ready-to-use)	✓	8 ml	ZUC019-008
		100 ml	ZUC019-100
		500 ml	ZUC019-500
Blocking Solution (Ready-to-use)	✓	100 ml	ZUC007-100
Wash Buffer (20 X)	✓	500 ml	ZUC020-500
		2500 ml	ZUC020-2500
Tris-Wash Buffer (20 X)		500 ml	ZUC052-500
Tris-Wash Buffer B (20 X), high detergent 		500 ml	ZUC066-500
Pink PAP Pen		1 Pen	ZUC064
Pink PAP Pen Mini		1 Pen	ZUC065
Methylgreen (Ready-to-use)		500 ml	ZUC002-500
Aqueous Mount (Ready-to-use)		30 ml	ZY-AMT030
		60 ml	ZY-AMT060
ZytoChem Plus Biotinylated secondary antibody, broad spectrum (Ready-to-use)	✓	8 ml	ZUC008-008
		125 ml	ZUC008-125



Reagents for heat induced epitope retrieval



Antibody Diluent ZUC025



Polymer Kit POLHRP



DAB Substrate kit DAB530

Cell Control Arrays

Cell Control Arrays

Zytemed Systems offers Cell Control Arrays for immunohistochemistry and in-situ hybridisation. Our Cell Control Arrays are homogenous paraffin blocks containing different numbers of embedded cell lines. These micro arrays are so small that they can be mounted together with the sample of interest e.g. patient specimen on one slide.





























The cell lines are fixed in buffered formalin under controlled conditions. The paraffin block can be cut as any regular paraffin block on a standard microtome without any further equipment. Red dyed paraffin was used for better orientation during cutting and mounting. Sections can be mounted on normal or coated slides following standard methods. A tissue core of heart muscle is included for rapid and easy orientation of the micro array on the glass slide. All Cell Control Arrays are labelled for research use only.

► **Zytemed Systems offers three different Cell Control Arrays**

The **Receptor Cell Control Array** contains 4 types of cores: a negative control cell line, ER positive cell line, PR positive cell line and a cell line with HER2 overexpression. The cell lines will positively react to IHC staining of estrogen receptor, progesterone receptor and HER2 antibodies.

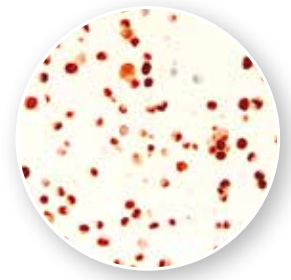
Each block consists of a set of low and a set of normal expressing cell lines. Thus, a differentiation between high and low staining intensity is possible, indicating the sensitivity of the stains.

The array is suitable for immunochemistry and *in-situ* hybridisation.

	Immunohistochemistry						
	Streptavidin Biotin/AEC			Polymer AP/HRP			
ER Clone: 1D5	 neg	 M		 neg	 M		 neg negative  M heart muscle tissue  N non ampl.  L low ampl.  H high ampl.
PR Clone: SP42	 neg	 M		 neg	 M		
HER2 Clone: SP3	 neg	 M		 neg	 M		
							HER2 ISH  N  L  H  N  M



HER2 (clone CB11) stained on Cell Control Array Receptor



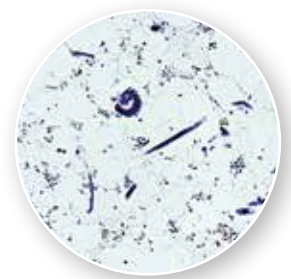
PR (clone PR-1) stained on Cell Control Array Receptor



ER (clone 1D5) stained on Cell Control Array Receptor



EBV *in situ*-hybridisation on Cell Control Array Virus



PAS stain on Cell Control Array Bacteria plus Fungi

The **Virus Cell Control Array** contains cell lines infected with CMV, HSV type 1 and type 2, EBV and Polyomavirus/SV40. The array is suitable for immunochemistry and in-situ hybridisation.

The **HPV Cell Control Array** contains 4 cores: a negative control cell line, HPV 6/11, HPV 16/18 and HPV 31/33/35 positive cell lines. The cell lines express the L1 capsid protein of the specific HPV types. The array is suitable for immunochemistry and molecular methods detecting the L1 capsid proteins or genes.

The **Bacteria Cell Control Array** contains 4 cores of cells: Attenuated bovine mycobacteria serve as positive control for the detection of acid fast mycobacteria. *Aspergillus fumigatus* is the positive control for fungi-specific stains. Gram-positive and gram-negative bacteria are included for a gram- or Giemsa-stain. The array is suitable for special stains, immunochemistry, and immunofluorescence applications.

► **Cell Control Arrays**

Description	Amount	Cat. No.
Cell Control Array Receptor	1 Block	MB-CC REZ
Cell Control Array Virus	1 Block	MB-CC VIR
Cell Control Array HPV	1 Block	MB-CC HPV
Cell Control Array Bacteria plus Fungi	1 Block	MB-CC BAC

Information

Master list for Immunohistochemistry

► Which primary antibody is used on which tissue?

Bladder	CK5, CK7, CK8, CK13, CK18, CK20, CEA, GATA-3, Ki-67, Uroplakin II, Uroplakin III
Brain	S-100, GFAP, Neurofilament, Myelin Basic Protein, Toxoplasma gondii
Breast	ER, PR, Ki-67, HER2, CK5/6, p63, CK14, GATA-3, Mammaglobin, EMA, CA15-3, GCDPF-15 (BRST-2), CK20, CK7, BCL2, COX-2, E-Cadherin, β -Catenin, EGFr, smooth muscle Actin, smooth muscle Myosin HMW (SMMS-1), Calponin, Caldesmon, Laminin-5, Collagen IV, CU18, TAG-72 (BRST-3), P-HER2, Cyclin-E, Cyclin-D1, CD105 (Endoglin), p120-Catenin (Catenin delta)
Cervix	CK5, CK6, CK13, CK14, CK17, CEA, p16, Stathmin
Colon	CK5, CK20, CDX-2, SATB2, CEA, EGFr, CD117 (c-kit), DOG1, Villin, Tenascin, PDGFR, β -Catenin, MLH1, MSH2, MSH6, PMS2, VEGF, VEGFr, COX-2
Esophagus	p63, CK HMW, CK pan, CK6, CK14, CK17
Germ cells	AFP, EMA, hCG, PLAP, Ferritin, WT-1, Oct-4, SALL4
Kidney	CK pan, CK8, CK18, Vimentin, EMA, Ksp-Cadherin, PAX-8, RCC (Renal Cell Carcinoma), Carbonic Anhydrase IX, GATA-3
Liver	Glypican-3, CK LMW, AFP, CK19, Hepatitis B and C, Hepatocyte specific antigen, Arginase-1, TTF-1 (clone 8G7G3/1)
Lung	TTF-1, Napsin A, CK pan, CK7 and CK20, CK HMW, SP-A, Desmoglein, Neurofilament, CD56, ERCC1, Secretagogin, Calretinin, ALK/p80, p40, MADL, RRM1
Lymphoma, leukemia	CD45/LCA, κ (Kappa), λ (Lambda), Cyclin-D1, different CD-Markers, ZAP-70, PAX-5, TdT, BCL-2, HGAL, LMO2, PU.1, BOB.1, ALK/p80, SOX-11, Annexin 1
Macrophage	CD68, CD163
Melanoma	S-100, HMB45, MART-1 (Melan-A), Vimentin, NKI/C3, MiTF, TRP-1, Tyrosinase, SOX-10, Melanoma Associated Antigen
Muscles	Actins, Vimentin, Desmin, Myosin, Myoglobin
Neuroendocrine	Synaptophysin, Chromogranin A, Neurofilament, CD56, Secretagogin, NSE, CK20, SSTR2A, SSTR5
Ovary	PLAP, CA125, WT-1, hCG, ER, Estradiol, Testosteron, CEA, Inhibin- α , Vimentin, PAX-8
Pancreas	Insulin, Chromogranin, Glucagon, Synaptophysin, NSE, Somatostatin, CEA, CA 19-9, Trypsin
Pituitary gland	FSH, ACTH, LH, TSH, Prolactin, Human Growth Hormone
Prostate	PSA, CK HMW, p63, PSAP, PIN Cocktail, P504S (AMACR), PSMA, Androgen Receptor, ERG
Testicles	PLAP, hCG, AFP
Thyroid gland	TTF-1, Thyroglobulin, Galectin-3, Calcitonin,
Vascular	Podoplanin (D2-40), LYVE-1, Faktor VIII (vWF), CD34, CD31, VEGF, VEGFr, ERG

This sheet is also available for download on our homepage.

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