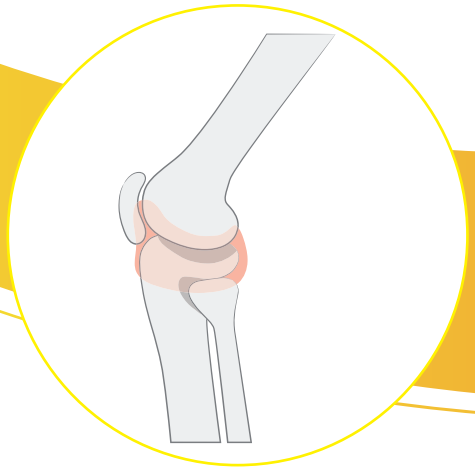
# IHC PANEL MARKERS

## Sarcoma tumor



BioGenex offers wide-ranging antibodies for several IHC panel for initial differentiation, tumor origin, treatment methods, and prognosis. All BioGenex antibodies are validated on human tissues to ensure sensitivity and specificity. BioGenex comprehensive IHC panels include a range of mouse monoclonal, rabbit monoclonal, and polyclonal antibodies to choose from.

BioGenex offers a vast spectrum of high-quality antibodies for both diagnostic and reference laboratories. BioGenex strives to support efforts in clinical diagnostics and drug discovery development as we continue to expand our antibody product line offering in both ready-to-use and concentrated formats for both manual and automation systems.

| Antibodies for Sarcoma tumor |
| --- |
| CD31, CD34, DOG1, EMA, ERG, S100 protein, SMA, Desmin, CD40, FLI-1, TLE-1, PAX-3, STAT-6, TFE3, SDHB, NKX2.2, NKX3.1, WT1, MUC4, CK Pan, Vimentin, Kappa, Lambda, CD45RO, CD45, CK7, VEGF, CA125, PDGFRB, CD4, CD163 |

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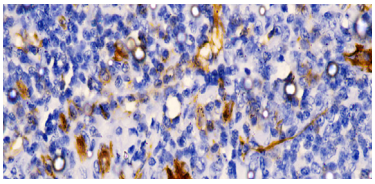
# IHC PANEL MARKERS - Sarcoma Tumor

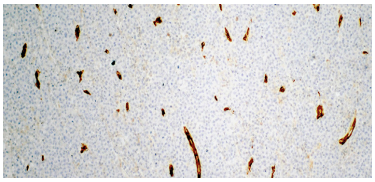
## CD31



The localization of CD31 to regions of cell-cell contacts, and the sequence similarity to CEA, a known intercellular adhesion molecule (ICAM), strongly suggests that CD31 may function as an ICAM, possibly mediating endothelial cell-cell contacts and promoting interactions between leukocytes and endothelial cells. Anti-CD31 monoclonal antibody JC/70A reacts with a membrane glycoprotein with an apparent size of 100 kD in endothelial cells and 130 kD in platelets. It strongly stains endothelium in normal tissue as well as benign and malignant tumor tissue. The antibody labels mega-karyocytes, platelets and occasionally plasma cells, and weakly stains mantle zone B cells, peripheral T cells and neutrophils

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| CD31 | SP141 | Membrane/Cytoplasm | AM232, AX232, MU232 |

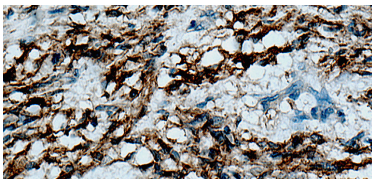
## CD34



CD34 functions as a cell-cell adhesion factor and cell-surface glycoprotein. It may also mediate the attachment of stem cells to bone marrow extracellular matrixes or directly to stromal cells. Cells expressing CD34 are normally found in the umbilical cord and bone marrow as hematopoletic cells, and in vascular endothelium. In addition to stem cell recognition, CD34 is expressed by vascular endothelium; it appears that proliferating endothelial cells express this molecule in greater amounts than resting cells. In comparison to factor VIII R Antigen, CD34 is an important marker for quantifying and purifying hematopoietic progenitor/stem cells. It is useful in identification of tumors with endothelial or lymphoid differentiation. In addition, CD34 aids in detection of gastrointestinal stromal tumors.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| CD34 | EP88 | Membrane | AN779, AY779, NU779 |

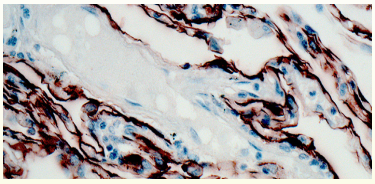
## DOG1



DOG1 is a cell surface protein selectively expressed in gastrointestinal stromal tumors (GIST). The DOG1 protein shows no homology at the DNA or amino acid level with KIT. DOG1 antibody labels the epithelium of the following organs: breast, prostate, salivary gland, liver, stomach, testis, pancreas, and gallbladder. DOG1 is a useful marker for GISTs, including PDGFRA mutants that fail to express KIT antigen.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| DOG1 | 1.1 | Nucleus/Cytoplasm | AM570, AX570, MU570 |

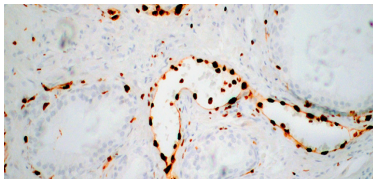
## Epithelial Membrane Antigen (EMA)



Epithelial membrane Antigen (EMA), also known as milk fat globule membrane protein, is present on the luminal surface of mammary gland epithelium. Although EMA is primarily located in mammary gland epithelium, other normal epithelia (e.g., lung) will also react against EMA antibody. Cells obtained from solid metastases and pleural effusions accompanying a breast cancer will react with EMA antibody. Human colon carcinoma, osteosarcoma, kidney carcinoma, hepatocellular carcinomas, adrenal carcinoma, embryonal carcinoma, liposarcoma, lung carcinoma, and mixed parotid tumor do not stain with EMA antibody. The combination of positive staining for keratin with negative EMA can be used to phenotype the above-mentioned epithelial tumors.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| Epithelial Membrane Antigen (EMA) | E29 | Membrane/Cytoplasm | AM057, AX057, MU057 |

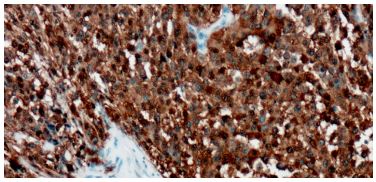
## ERG, Ets-Related Gene



ERG, the ETS related gene, is directed against the C-terminus of the ETS transcription regulator, ERG, and is capable of detecting both wildtype ERG, and truncated ERG resulting from ERG gene rearrangement. This antibody exhibits a nuclear staining pattern and may be used to aid in the identification of prostate adenocarcinomas through the detection of truncated ERG. This ERG antibody also recognizes Fli-1 by western blot analysis.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| ERG, Ets-Related Gene | EP111 | Nucleus | AN782, AY782, NU782 |

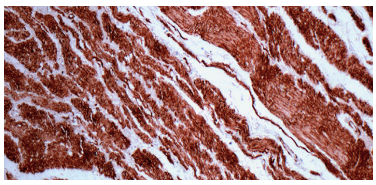
## S100 Beta



S100 Beta is a homodimeric member of the S100 superfamily. S100 is a family of Ca2+binding proteins, comprised of 19 members that are differentially expressed in a large number of cell types. The protein has been implicated in cellular processes such as cell differentiation and growth. S100 Beta is abundant in glial cells of the central and peripheral nervous system. In melanocytes. Chondrocytes, and adipocytes. Antibody to S100 Beta also labels Langerhans cells, histiocytes, epithelial, myoepithelial cells and integrating reticular cells of lymphoid tissue and integrating reticular cells of lymphoid tissue and tumors originated from these cells. S100 Beta is a useful marker for diagnosis of melanoma, tumors of nervous system..

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| S100 Beta | EP32 | Cytoplasm | AN713, AY713, NU713 |

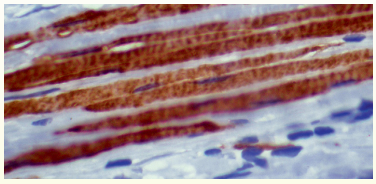
## Actin; Smooth Muscle



Actin is one of two major cytoskeletal proteins. The antibody can be used to identify smooth muscle tumors. It stains leiomyomas, leiomyosarcomas and pleomorphic adenomas but does not stain carcinomas, melanomas, lymphomas or nonsmooth muscle sarcomas. It stains the muscularis and muscularis mucosa of the gastrointestinal tract, the uterine myometrium, medial layer of blood vessels, the mesenchymal components of the prostate, and myoepithelial cells of salivary glands and other organs. The antibody does not stain striated muscle such as skeletal and cardiac muscle, endothelium, connective tissue, epithelium or nerve.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| Actin; Smooth Muscle | 1A4 | Cytoplasm | AM128, AX128, MU128 |

## Desmin

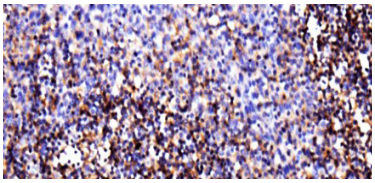


Intermediate filaments together with microfilaments and microtubules form a major part of the extensive cytoplasmic network called the cytoskeleton. Desmin is a 56 kD intermediate filament expressed by cells of smooth, skeletal, and cardiac muscle. In myofibrils, desmin is localized in skeletal and cardiac muscle Z lines, in regions of cell-cell juncture, at the site of apposition of the Z line with the plasma membrane, and in cardiac intercalated disks. The specificity of Desmin to muscle cells makes it a useful marker in identifying sarcomas derived from smooth and striated muscle cells such as leiomyosarcomas and rhabdomyosarcomas. This antibody does not cross -react detectably with GFAP, keratin, vimentin, or neurofilament. This antibody stains positive in muscle cells.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| Desmin | D33 | Cytoplasm | AM072, AX072, MU072 |

# **IHC PANEL MARKERS -** Sarcoma Tumor

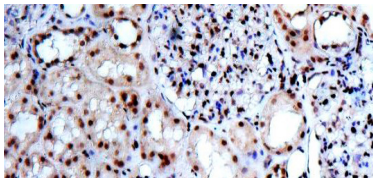
## CD40



CD40 or Bp50 is a member of the TNF receptor superfamily and a central regulator of anti-tumor immunity. Activation of CD40 on the cell surface of antigen presenting cells (APCs) promotes APCs ability to prime antigen-specific T cells and tumorinfiltrating myeloid cells thus enhancing their anti-tumor and anti-fibrotic activity (1, 2, 3). The ligand for CD40 is CD154, which is expressed on a variety of cell types, including activated T and B cells, endothelial and smooth muscle cells. CD40 is a promising target for cancer immunotherapy and CD40 activation in clinical trials demonstrated encouraging results in patients with pancreatic carcinoma, Hodgkin lymphoma, high-grade B cell lymphoma and metastatic melanoma

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| CD40 | CL1673 | Membrane | AM913, AX913, MU913 |

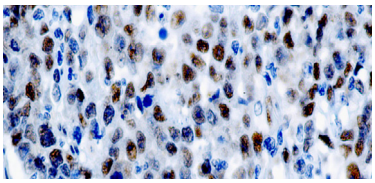
## Human FLI-1



Defects in FLI-1 are a cause of Ewing sarcoma, a highly malignant, metastatic, primitive small round cell tumor of bone and soft tissue that affects children and adolescents. It belongs to the Ewing sarcoma family of tumors, a group of morphologically heterogeneous neoplasms that share the same cytogenetic features. They are considered neural tumors derived from cells of the neural crest. Ewing sarcoma represents the less differentiated form of the tumors. A chromosomal aberration involving FLI-1 is found in patients with Ewing sarcoma.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| Human FLI-1 | MRQ-1 | Nucleus | AMB24, AXB24, MUB24 |

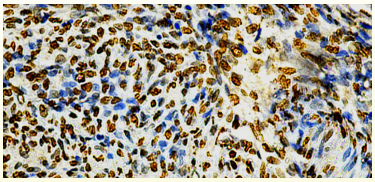
## TLE-1



Transducin-like enhancer protein 1 (TLE1) is a protein that is encoded by the TLE1 gene family and involved in control of hematopoiesis, neuronal, and terminal epithelial differentiation. Expression of the TLE genes (TLE1, TLE2, TLE3 and TLE4) correlates with immature epithelial cells that are progressing toward a terminally differentiated state, suggesting a role during epithelial differentiation. Anti-TLE1 antibody is a sensitive and specific marker for synovial sarcoma than other markers including BCL2, epithelial membrane antigen (EMA) and cytokeratins. It is used to differentiate synovial sarcoma from other sarcomas, including histologically similar tumors such as malignant peripheral nerve sheath tumor.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| TLE-1 | ZM93 | Nucleus | AMB58, AXB58, MUB58 |

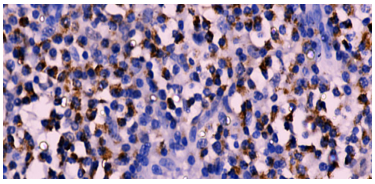
## PAX3



PAX3 (Paired Box 3) is a DNA-binding protein consisting of an amino-terminal "paired" box domain and a paired-type homeodomain. It belongs to paired box (PAX) family of transcription factors and plays a critical role during fetal development. PAX3 is involved in development of peripheral nervous system, melanocytes, some vascular smooth muscle and are responsible for embryonic patterning and organogenesis. Mutations in PAX3 gene are associated with Waardenburg syndrome II (WSII), WSI/WSIII, alveolar rhabdomyosarcoma and craniofacial-deafness-hand syndrome.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| PAX3 | PAX3/4700 | Nucleus | AMD28, AXD28, MUD28 |

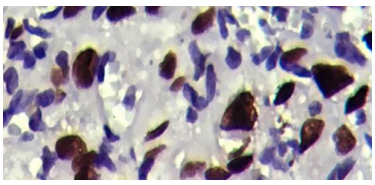
## STAT6



Signal transducers and activators of transcription 6 (STAT6) is a member of the Janus family tyrosine kinases (Jak)/ STAT signal transduction pathway and mediates cytokine signaling by IL 4 and IL-13. In response to cytokines and growth factors, STAT family members are phosphorylated by the receptor associated kinases, and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. Phosphorylation at Tyr641 activates STAT6 which is required for responsiveness to IL-4 and IL-13.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| STAT6 | D-1 | Cytoplasm | AMB34, AXB34, MUB34 |

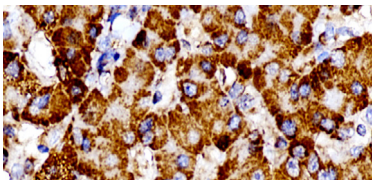
## TFE3



Transcription factor E3 (TFE3) is a member of a family of basic helix-loop-helix leucine zipper transcription factors that includes MITF, TFEB, TFE3, and TFEC. Transcription factor binding to IGHM enhancer 3 or transcription factor E3 (TFE3) gene is mapped to human chromosome Xp11.23. In the immune system, TFE3 plays important roles in modulating immunoglobulin heavy-chain expression and regulating B-cell activation. Members of this family form heterodimers with each other, bind the same DNA sequences, and undergo the same types of posttranslational modifications; including sumoylation

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| TFE3 | EP285 | Nucleus/Cytoplasm | ANB13, AYB13, NUB13 |

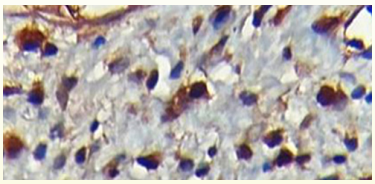
## SDHB



Succinate Dehydrogenase Complex, Subunit B (SDHB), also known as iron-sulfur subunit of complex II (Ip) or SDH2, is a protein encoded by the SDHB gene which belongs to the Succinate Dehydrogenase/fumarate reductase iron-sulfur protein family. It is one of four protein subunits forming Succinate Dehydrogenase, the other three being SDHA, SDHC and SDHD. Succinate Dehydrogenase (SDH) catalyzes the oxidation of Succinate and ubiquinone to fumarate and ubiquinol in aerobic respiration reactions. Mutations in SDH gene have been linked to pheochromocytoma (PCC), paraganglioma (PGL), gastrointestinal stromal tumor (GIST), renal cell carcinoma, and ovarian cancer.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| SDHB | SDHB/2382 | Cytoplasm | AMA99, AXA99, MUA99 |

## NKX2.2

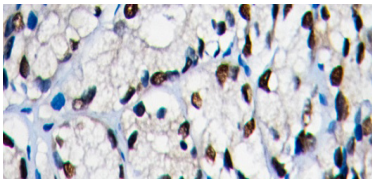


NKX2.2 is a member of NKX family of transcription factors. It is a homeodomain-containing transcription factor which is necessary for neuroendocrine differentiation in the central nervous system and pancreas. It is also involved with neuronal developing, patterning, and fate specification of neurons and oligodendrocytes. NKX2.2 expression has been found in the developing forebrain, spinal cord, Ewing's sarcoma and neuroendocrine tumors of the gut. NKX2.2 antibody is considered as a sensitive panel marker for distinguishing Ewing's sarcoma from other round blue cell tumors.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| NKX2.2 | D-4 | Nucleus | AXC23, AXC23, MUC23 |

# IHC PANEL MARKERS - Sarcoma Tumor

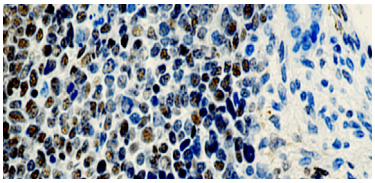
## NKX3.1



The NKX3.1 gene is located on chromosome 8p21.2, whose expression is predominantly localized to prostate epithelium. The NKX3.1 protein acts as a nuclear transcription factor that has a critical function in prostate development and tumor suppression, and is a negative regulator of epithelial cell growth in prostate tissue. Apart from prostate epithelium, NKX3.1 is found in testis, ureter, and pulmonary bronchial mucous glands. NKX3.1 is a highly sensitive and specific marker for prostate adenocarcinoma in line with other prostate markers like Prostate Specific Antigen (PSA) and Prostein (p501S), particularly useful in low differentiated tumors where PSA and/or Prostein may be weakly expressed or lost.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| NKX3.1 | NKX3.1/2576 | Nucleus | AMA55, AXA55, MUA55 |

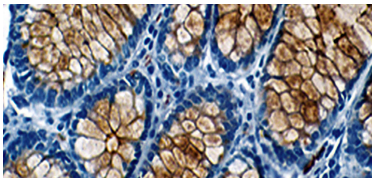
## WT1



The antibody reacts with all isoforms of the full-length WT1 and also identifies WT1 lacking exon 2-encoded amino acids, frequently found in subsets of sporadic Wilm's tumors.. The WT1 gene is normally expressed in fetal kidney and mesothelium, expression has been suggested as a marker for Wilm's tumor and mesothelioma. WT1 protein has been identified in proliferative mesothelial cells, malignant mesothelioma, ovarian carcinoma, gonadoblastoma, nephroblastoma, and desmoplastic small round cell tumor. WT1 protein expression in mesothelial cells has become a reliable marker for the diagnosis of mesotheliomas.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| WT1 | WT1/1434R | Nuclear/Cytoplasmic | AN940, AY940, NU940 |

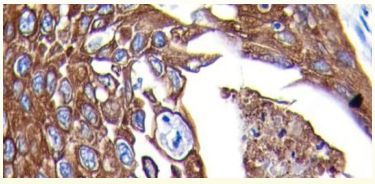
## MUC4



MUC4 is a membrane-associated protein of the mucin (MUC) gene family, encoded by a gene on chromosome 3q29 and produced by epithelial cells as a heterodimer. The MUC4 protein is thought to play a protective role for vulnerable epithelia, particularly in the airway, eye, female reproductive tract, and mammary gland. Alterations in MUC4 expression have been observed in association with a variety of inflammatory and neoplastic states; including non-small cell lung carcinoma, hyperplastic polyps of the colon, and serrated colon adenomas, and breast carcinoma.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| MUC4 | 1G8 | Membrane/Cytoplasm | AM455, AX455, MU455 |

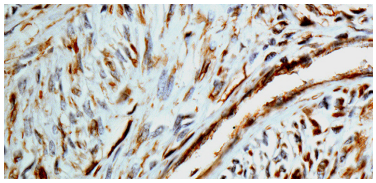
## Cytokeratin PAN



Keratins are useful markers in cancer research and tumor diagnosis as observed by many studies. This antibody is a broad spectrum anti-pan-cytokeratin antibody cocktail, which differentiates epithelial tumors from non-epithelial tumors e.g. squamous vs. adenocarcinoma of the lung, liver carcinoma, breast cancer, and esophageal cancer. It has been used to determine the source of various neoplasms and help to study the distribution of cytokeratin containing cells in epithelia during normal development and during the development of epithelial neoplasms.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| Cytokeratin PAN | AE-1/AE-3 | Cytoplasm | AMA46, AXA46, MUA46 |

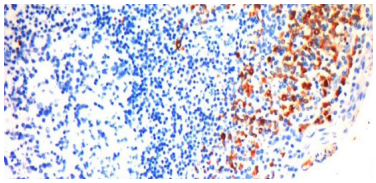
## Vimentin



Vimentin is the major intermediate filament in a variety of mesenchymal or mesenchymally derived non-muscle cell types. Vimentin is found in all types of sarcomas and lymphomas. Positive staining for vimentin is seen in most cells of fibrosarcomas, liposarcomas, malignant fibrous histocytomas, angiosarcomas, chondrosarcomas and lymphomas. When the vimentin antibody is used in combination with other antibodies as a panel, it can aid in the histological classification of normal and malignant tissues.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| Vimentin | V9 | Cytoplasm | AM074, AX074, MU074 |

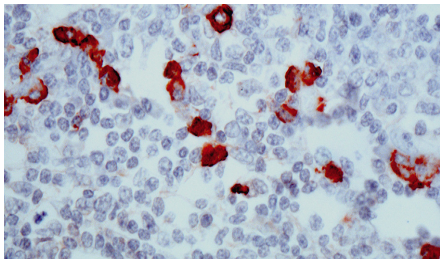
## Kappa Light Chain



There are two types of light chain in humans (Kappa (κ) Light Chain and Lambda (λ) Light Chain. Normally, the total Kappa to Lambda ratio is about 2:1 in serum, with a highly divergent ratio indicative of neoplasm. If one type of light chain level is significantly higher than that of the other type, it indicates a malignant condition, such as B-cell lymphoma. This antibody is designed specific for Kappa Light Chain of Immunoglobulin, as a B cell marker. Detection of gene rearrangements and abnormal expression of Kappa Light Chain in immunoglobulin, are important methods in the diagnosis of B-cell lymphoma, Plasma cell myeloma, and Reactive follicular hyperplasia.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| Kappa Light Chain | HP6053+L1C1 | Cytoplasm | AM980, AX980, MU980 |

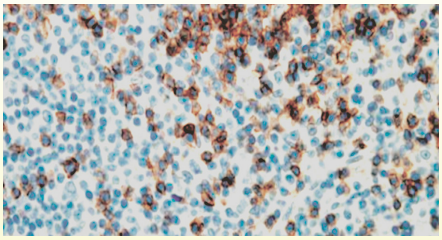
## Lambda Light Chain



The light chains of immunoglobulin molecules may be either Kappa or Lambda The clonal nature of any immunoglobulinproducing cell population can be determined by its light chain structure. Lambda chains are expressed on the surface of Bcells. Antibodies to kappa and lambda light chains are used for the evaluation of leukemias, plasmacytomas, and certain nonHodgkin's lymphomas, the majority of which are derived from B-cell lineage. The most important uses of this technique would be in distinguishing atypical reactive follicular lymphoid hyperplasia from follicular lymphoma, undifferentiated carcinoma from large cell lymphoma, pseudolymphoma from lymphoma, and reactive plasmacytosis from well differentiated plasmacytoma.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| Lambda Light Chain | Polyclonal | Cytoplasm | AR049, AW049, PU049 |

## CD45RO

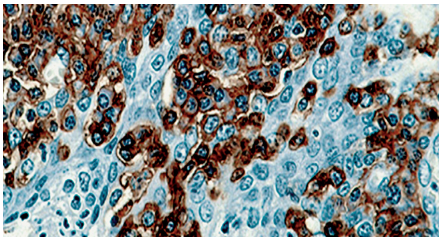


This antibody recognizes a 185 kD molecule (CD45RO) which occurs on mature activated T cells, most thymocytes, and a sub-population of resting T cells within both the CD-4 and CD8 subsets. UCHL-1 shows no reactivity with normal B or NK cells, but will react with granulocytes and monocytes. This antibody can be used as a marker of T cell lymphomas and other T cell neoplasms. The antigen has been shown to be immunologically unrelated to the lymphocyte-functionassociated antigen (LFA-1), which has a similar molecular weight.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| CD45RO | UCHL-1 | Membrane/Cytoplasm | AM113, AX113, MU113 |

# **IHC PANEL MARKERS -** Sarcoma Tumor

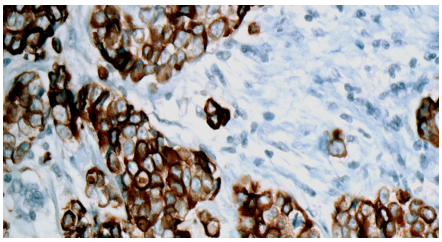
## CD45



This antibody against CD45 (Leukocyte Common Antigen) recognizes the 200 kD antigen found on lymphoid cells, macrophages, histiocytes, and neutrophils. CD45 is helpful in determining the leukocytic nature of anaplastic tumors. Combined with other antibodies such as those to cytokeratins and S-100 protein, this monoclonal antibody to leukocyte common antigen can be used in the characterization of undifferentiated large cell neoplasms. Most neoplastic B cells and T cells stain positive in leukemia and in non-Hodgkin's lymphomas, whereas most neoplastic myeloid and erythroid cells are negative.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| CD45 | PD7/26/16 & 2B11 | Membrane | AM111, AX111, MU111 |

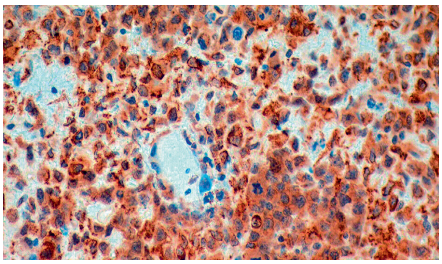
## Cytokeratin 7



Cytokeratin 7 is a 54 kD marker of simple epithelium. Antibody to cytokeratin 7 strongly stains all cell layers of the urinary bladder transitional epithelium. However, cytokeratin 7 is absent from gastrointestinal epithelium, hepatocytes, proximal and distal tubules of the kidney, and myoepithelium. It also cannot be detected in the stratified epithelia of the skin, tongue, esophagus, or cervix.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| Cytokeratin 7 | OV-TL12/30 | Cytoplasm | AM255, AX255, MU255 |

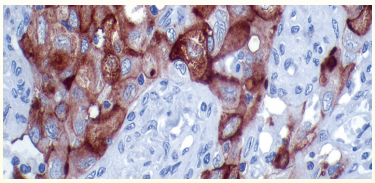
## VEGF



Vascular endothelial factors (VEGFs) are a family of closely related growth factors having a conserved pattern of eight cysteine residues and sharing common VEGF receptors. VEGF receptors stimulate the proliferation of endothelial cells, induce angiogenesis, and increase vascular permeability in both large and small vessels. The mitogenic activity of VEGFs appears to be mediated by specific VEGF receptors.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| VEGF | Polyclonal | Cytoplasm | AR483, AW483, PU483 |

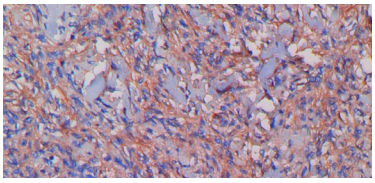
## CA 125



Monoclonal antibody Ov185:1 reacts with repetitive protein determinant expressed in the protein core of the CA125 human ovarian cancer antigen. This marker is usually associated with ovarian epithelial malignancies. Immunohistochemistry with CA125 antibody in conjunction with other markers was found to be useful in tracing the origin of adenocarcinoma with unknown primary site. Carcinoembryonic antigen, CA 125, surfactant, Ecadherin, N-cadherin, and vimentin markers are found to be useful in differentiating epithelial tumors of lung versusovarian origin. The higher rate of positive staining was also seen in endometrial cancers.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| CA 125 | Ov185:1 | Cytoplasm | AM429, AX429, MU429 |

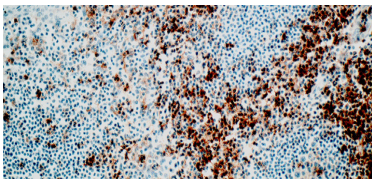
## PDGFR BETA



Platelet derived growth factor receptors (PDGFR) are cell surface tyrosine receptors that act as a receptor for the platelet derived growth factors family. Alpha and Beta are two different subunits for PDGFR. They regulate many processes such as cell proliferation, cellular differentiation, cell growth, development, and play a major role in many diseases such as cancers. PDGFRbeta has been implicated in establishing blood vessel formation and early hematopoeisis. Autocrine activation of PDGF signaling pathways is involved in certain gliomas, sarcomas, and leukemias. Up regulation of PDGFR beta has been observed on endothelial cells of vessels which vascularize the tumor.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| PDGFR BETA | RM303 | Cytoplasm | AN992, AY992, NU992 |

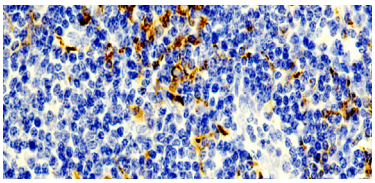
## CD4



CD4 is a 55-60 kD cell-surface glycoprotein, which participates in the molecular complexes involved in both T-cell development and its antigen recognizing activity by binding to the nonpolymorphic region of class II MHC. CD4 is considered a stage marker of T-cell development in the thymus, as it is expressed on the cell surface in a stage specific manner, during T-cell development. This antibody reacts on a low level with human monocytes and macrophages but does not react with Bcells, granulocytes and thrombocytes.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| CD4 | 4B12 | Membrane | AM421, AX421, MU421 |

## CD163



CD163 is a member of the SRCR family class B and is expressed in most subpopulations of mature tissue macrophages. The SRCR superfamily is a family of structurally related transmembrane glycoproteins. The characteristic building block of the extracellular domain of these molecules is the SRCR domain, which is an ancient and highly conserved domain of approximately 110 residues. The best characterized function of CD163 is related to the binding of the Hemoglobin: Haptoglobin complexes.

| Antibody | Clone | Localization | Catalog Family |
|---|---|---|---|
| CD163 | M130/2162 | Membrane/Cytoplasm | AMA02, AXA02, MUA02 |

# **IHC PANEL MARKERS -** Sarcoma Tumor

## BioGenex Primary Antibody Format and Pack Size

BioGenex antibodies are optimized to provide a maximum signal with the minimum background for immunohistochemical staining. All our antibodies are optimized and recommended for use with all Super Sensitive™ Detection Systems to provide optimum staining.

BioGenex Ready-to-Use (RTU) antibodies are fully optimized for use with BioGenex Detection Systems without the need for further dilution or titration. BioGenex concentrated antibodies are provided with recommended dilutions for optimal use with BioGenex Detection Systems, allowing rapid titration and testing.

| Prefix | Type | Species | Suffix | Volume and Format |
|---|---|---|---|---|
| AM/AN | Monoclonal | AM-Mouse/AN-Rabbit | -5M/5ME | 6 mL - Ready-to-use (manual) |
| AM/AN | Monoclonal | AM-Mouse/AN-Rabbit | -10M/10ME | 10 mL - Ready-to-use (i6000™) |
| AX/AY | Monoclonal | AX-Mouse/AY-Rabbit | -YCD/YCDE and -50D/50DE | 16 mL and 5 mL Ready-to-use (Xmatrx®) |
| AR | Polyclonal | Rabbit | -5R/5RE | 6 mL - Ready-to-use (manual) |
| AR | Polyclonal | Rabbit | -10R/10RE | 10 mL - Ready-to-use (i6000™) |
| AW | Polyclonal | Rabbit | -YCD/YCDE and -50D/50DE | 16 mL and 5 mL Ready-to-use (Xmatrx®) |
| MU/NU | Monoclonal | AM- Mouse/AN-Rabbit | -UC/UCE and -5UC/5UCE | 1 mL and 0.5 mL Concentrate |
| PU | Polyclonal | Rabbit | -UC/UCE and -5UC/5UCE | 1 mL and 0.5 mL Concentrate |

| Other Panel Markers from BioGenex | |
|---|---|
| Breast cancer panel | Neuroendocrine tumor |
| B&T cell Associated Lymphoma | Pancreas tumor |
| Cervical cancer | Liver cancer |
| Colorectal and stomach cancer | Kidney cancer |
| Lung cancer | Bladder cancer |
| Melanoma | Germ cell tumor |
| Muscle cancer | Vascular tumor |
| Ovarian cancer | Pituitary gland |
| Prostate/Testicular cancer | Esophagus cancer |

For specific information on the individual antibody, please refer to the datasheets available on www.biogenex.com or call BioGenex Technical Support at **1(800)421-4149** or write to support@biogenex.com.

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