

# Comparative Pathology Laboratory

Department of Pathology • College of Veterinary Medicine • University of Georgia ®

## Immunohistochemical Stains for Selected Cell Markers

Immunohistochemical Stains for Cell Markers		
<i>Antibodies</i>	<i>Antibody source</i>	<i>Selected examples of use</i>
<b>Lymphoid markers</b>		
BLA36	Mouse	Lymphoid organ development/Classification of lymphoproliferative disorders
CD3	Rabbit	Lymphoid organ development/Classification of lymphoproliferative disorders
CD18	Mouse	Lymphoid organ development/Classification of lymphoproliferative disorders
CD21	Mouse	Lymphoid organ development/Classification of lymphoproliferative disorders
CD79	Mouse	Lymphoid organ development/Classification of lymphoproliferative disorders
<b>Endocrine markers</b>		
Calcitonin	Rabbit	Identification of C-cells (parafollicular cells)
Thyroglobulin	Rabbit	Identification of follicular epithelial cells
Glucagon	Rabbit	Differentiation marker for stem cells, etc.
Insulin	Guinea pig	Differentiation marker for stem cells, etc.
<b>Proliferation markers</b>		
Ki-67	Rabbit	Determining proliferative index of tumors
PCNA	Mouse	Determining proliferative index of tumors
<b>Apoptosis markers</b>		
Apoptag kit	Rabbit	Determining apoptotic index of tumors
<b>Intermediate filaments</b>		
Cytokeratin, Pan	Mouse	Teratoma analysis, differentiation marker for stem cells, etc.
Cytokeratin, AE1/AE3	Mouse	Teratoma analysis, differentiation marker for stem cells, etc.
Neurofilament	Mouse	Teratoma analysis, differentiation marker for stem cells, etc.
GFAP	Mouse	Teratoma analysis, differentiation marker for stem cells, etc.
Vimentin	Mouse	Epithelial-mesenchymal transition, teratoma analysis, etc.
<b>Cell-specific proteins</b>		
Desmin	Mouse	Specific for all types of muscle cells
Smooth muscle actin	Mouse	Specific for smooth muscle cells (myoepithelial cells, etc.)
Lysozyme	Rabbit	Specific marker for tissue macrophages
Mac387	Mouse	Specific marker for tissue macrophages
Factor VII-related antigen	Rabbit	Specific marker for endothelial cells
Myelin Basic Protein	Mouse	Specific marker for myelin
Neuron Specific Enolase	Mouse	Specific marker for neurons (teratoma analysis, etc.)
S100	Rabbit	Specific marker for Schwann cells of the PNS
Melan A	Mouse	Specific marker for melanin-producing cells
<b>Miscellaneous proteins</b>		
C-kit	Rabbit	Proto-oncogene (tumor prognosis, cell signaling, ect.)
Chromogranin A	Mouse	Marker for neurons and endocrine cells
Synaptophysin	Mouse	Specific for neuroendocrine cells and neurons in CNS
COX-2	Mouse	Identification of COX-2 (over)expression
E-Cadherin	Mouse	Epithelial-specific (epithelial-mesenchymal transition, etc.)
p53	Mouse	Tumor suppressor gene (tumor diagnosis, etc.)
Wilms' Tumor Antigen	Rabbit	Proto-oncogene (tumor prognosis, cell signaling, ect.)

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