Anti-CD34 Antibody [PDM0-12]

HA601109

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	IHC-P
Molecular Wt:	Predicted band size: 41 kDa
Clone number:	PDM0-12

Description: CD34 (also named myeloid progenitor cell antigen) is a heavily glycosylated type I transmembrane protein. CD34 is detected in myeloid blasts in myelodysplastic syndrome and acute myeloid leukaemia in most cases as well as lymphoblasts in most cases of B-acute lymphoblastic leukaemia. Mature B- and T-cell lymphomas and leukaemias are CD34 negative. The majority of vascular tumours, including haemangiosarcoma and Kaposi sarcoma are CD34 positive, the protein frequently being expressed in abluminal processes. However, only about 30% of the lymphangiomas are CD34 positive. CD34 positivity is seen in most cases of dermatofibrosarcoma protuberans, solitary fibrous tumor, lipoma (particularly spindle cell lipoma) and liposarcoma, gastrointestinal stromal tumor (strong positivity in about 80% of the cases, which are also CD117 positive), and a varying proportion of meningioma. Moderate expression is seen in cutaneous leiomyoma, while weak expression is present in uterine and soft tissue smooth muscle tumours. Some cases of myofibroblastoma have revealed CD34 positivity. Schwannoma is CD34 positive mainly in Antoni B areas. Neurofibroma and neurofibrosarcoma may also stain. About 50% of epitheloid sarcomas show strong focal or generalized staining for this antigen. Some synovial sarcomas may show focal staining. Fibrous histiocytoma is CD34 negative. CD34 is expressed only exceptionally in carcinomas (kidney, thyroid gland) and clear cell sarcoma/melanoma. In a panel, CD34 staining is useful for the classification of myeloid and lymphoid neoplasms as well as spindle cell neoplasms (particularly identification of gastrointestinal stromal tumour and haemangiosarcoma). Liver and appendix is recommended as positive and negative tissue controls for CD34. In liver the protocol must be calibrated to provide a moderate to strong predominately membranous staining reaction of endothelial cells in the portal vessels, but also of the periportal sinusoidal endothelial cells serving as “low expressors” for an optimal calibrated assay for CD34. No staining reaction must be seen in liver cells.

Immunogen:	Synthetic peptide.
Positive control:	Human liver tissue, human liver carcinoma tissue, human kidney tissue, human placenta tissue.
Subcellular location:	Membrane.
Database links:	SwissProt: P28906 Human
Recommended Dilutions:	
IHC-P	1:1,000
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

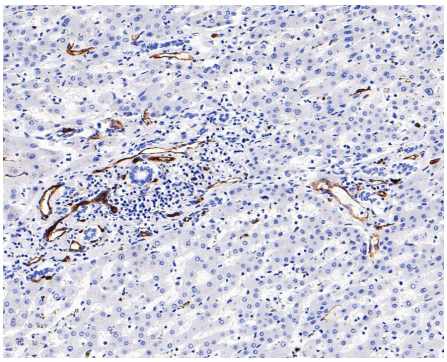

Fig1: Immunohistochemical analysis of paraffin-embedded human liver tissue with Mouse anti-CD34 antibody (HA601109) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601109) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

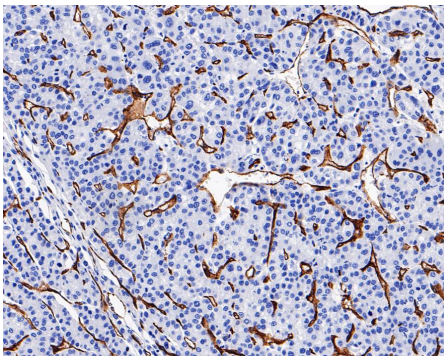

Fig2: Immunohistochemical analysis of paraffin-embedded human liver carcinoma tissue with Mouse anti-CD34 antibody (HA601109) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601109) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

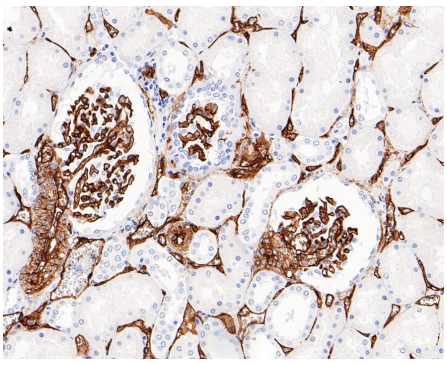

Fig3: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Mouse anti-CD34 antibody (HA601109) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601109) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

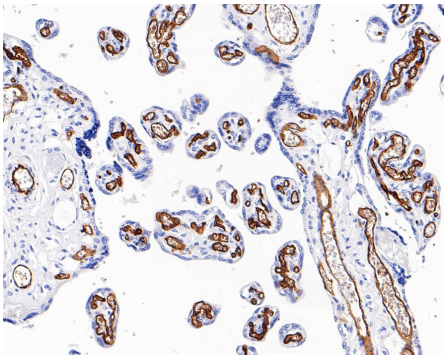

Fig4: Immunohistochemical analysis of paraffin-embedded human placenta tissue with Mouse anti-CD34 antibody (HA601109) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601109) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Torlakovic G, et al. CD34/QBEND10 immunostaining in the bone marrow trephine biopsy: a study of CD34-positive mononuclear cells and megakaryocytes. Arch Pathol Lab Med. 2002; 126:823-8.
2. Kisluk J, et al. Immunohistochemical diagnosis of gastrointestinal stromal tumors - an analysis of 80 cases from 2004 to 2010. Adv. Clin Exp Med. 2013; 22:33-9.