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Product Information

Anti-Podoplanin (HG-19)
produced in rabbit, affinity isolated antibody

Catalog Number **P1995**

Product Description

Anti-Podoplanin (HG-19) is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 111-129 of rat podoplanin with N-terminal added cysteine, conjugated to KLH. The corresponding mouse sequence differs by one residue. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Podoplanin (HG-19) recognizes rat podoplanin. Applications include immunoblotting (~38 kDa) and immunofluorescence staining. Detection of podoplanin by immunoblotting is specifically inhibited with the immunizing peptide.

Podoplanin is an integral membrane mucoprotein present on the surface of podocytes in kidney glomeruli and the parietal cells of the glomerular Bowman's capsule.[1-3] It is a single membrane-spanning protein composed of heavily glycosylated extracellular domain and a short intracytoplasmic tail. Glycoproteins with similar sequences were described in rodent lung type I alveolar cells, mesothelial cells, osteoblasts and osteocytes, and thymic epithelial cells.[3, 5] Podoplanin, also named E11 antigen, has been described to be present in normal, inflammatory, and neoplastic lymphatic capillary endothelium.[1, 3, 4, 6-9] It is not expressed *in vivo* in blood capillary endothelial cells, human hemangiomas, and lymph node high endothelial venules. Large lymphatic vessels having smooth muscle cells may lack podoplanin. Podoplanin is expressed selectively by dermal microvascular lymphatic endothelial cells but not by blood vascular endothelial cells. Expression of podoplanin is regulated by the lymphatic-specific homeobox gene Prox-1.[7-9] Podoplanin does not seem to be upregulated in tumor angiogenesis. It is detectable in human angiosarcomas, lymphangiomas, and in Kaposi's sarcomas. Podoplanin appears to play an important role in the maintenance of podocyte foot processes, and hence, glomerular permeability.[1, 2] Experiments involving depletion of T1α/podoplanin in mice indicate that it has a critical regulatory role in the formation of the lymphatic vasculature.[7-9]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4 containing 15 mM sodium azide.

Antibody Concentration: 1.0-1.5 mg/ml

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing, or storage in frost-free freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 2.5-5 μg/ml is recommended using whole extracts of rat kidney glomeruli and rat lung and a chemiluminescent detection reagent.

Indirect immunofluorescence: a working antibody concentration of 10-20 μg/ml is recommended to detect podoplanin by staining glomeruli in acetone-fixed rat kidney frozen sections.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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