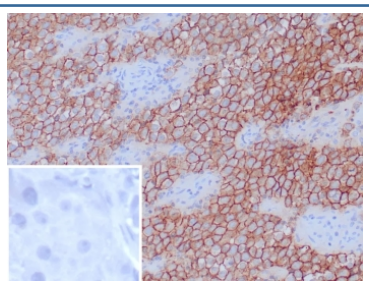
Podoplanin Antibody D2-40 / Lymphatic Endothelial Marker [clone D2-40] (V5650)

Catalog No.	Formulation	Size
V5650-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5650-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5650SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	D2-40
Purity	Protein G affinity
UniProt	Q86YL7
Localization	Cytoplasm, Membrane
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Podoplanin Antibody D2-40 / Lymphatic Endothelial Marker is available for research use only.



Podoplanin Antibody D2-40 in Human Tonsil IHC. Immunohistochemistry staining of FFPE human tonsil tissue with Podoplanin Antibody D2-40 / Lymphatic Endothelial Marker at 1 ug/ml. The inset shows PBS used in place of primary antibody as a secondary antibody negative control. HIER was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 min followed by cooling before testing. The observed staining demonstrates podoplanin expression in human tonsil tissue.

Description

Podoplanin Antibody D2-40 / Lymphatic Endothelial Marker detects podoplanin (PDPN), a mucin-type transmembrane glycoprotein strongly associated with lymphatic endothelial cells. Clone D2-40 is a widely studied monoclonal antibody used to identify podoplanin expression in lymphatic endothelium and a variety of normal and neoplastic tissues. Podoplanin is also known as gp36, T1 alpha and Aggrus and is involved in lymphatic vascular development, cell migration and tissue organization. The NSJ datasheet describes podoplanin as being expressed in lymphatic capillary endothelium but not blood vascular endothelium.

Podoplanin is a heavily O-glycosylated type I transmembrane protein with a short cytoplasmic tail. Despite lacking intrinsic enzymatic activity, PDPN can influence cell shape, adhesion and migration through interactions with membrane-associated and cytoskeletal proteins. Podoplanin also interacts with CLEC-2 on platelets, an interaction important to platelet activation and the proper separation of developing lymphatic and blood vascular systems.

D2-40 is particularly associated with research involving lymphatic endothelial differentiation. Podoplanin expression can be used to distinguish lymphatic vessels from blood vascular endothelium and to investigate lymphangiogenesis in normal and diseased tissues. PDPN is also expressed in lymphangiomas and vascular tumors showing lymphatic differentiation. The V5650 datasheet specifically notes podoplanin expression in lymphangiomas, Kaposi sarcomas and a subset of angiosarcomas with probable lymphatic differentiation.

Podoplanin and D2-40 are also extensively studied in tumor pathology. PDPN expression has been demonstrated in epithelioid mesothelioma and other neoplasms, and D2-40 is frequently investigated as part of antibody panels for evaluating mesothelial differentiation. Podoplanin expression has additionally been reported in hemangioblastoma and seminoma, illustrating the broader relevance of this marker to tumor classification and cancer research.

Clone D2-40 is a mouse monoclonal antibody generated using resected ovarian dysgerminoma tissue as the immunogen. It is reactive with human samples and has been evaluated by immunohistochemistry in FFPE tissue, with the NSJ datasheet demonstrating staining in human tonsil at 1-2 ug/ml. NSJ Bioreagents supplies antibodies for lymphatic, vascular and cancer research. A Podoplanin Antibody can be used to investigate PDPN expression, lymphatic endothelial differentiation, lymphangiogenesis and podoplanin-associated tumor biology.

For broader research on podoplanin expression and lymphatic endothelial biology, including a protein microarray validated reagent, see our Podoplanin Antibody / Lymphatic Endothelial Cell Marker page.

Application Notes

Optimal dilution of the Podoplanin Antibody D2-40 / Lymphatic Endothelial Marker should be determined by the researcher.

Immunogen

Resected tissue from dysgeminoma of the ovary was used as the immunogen for the Podoplanin Antibody D2-40.

Storage

Aliquot the Podoplanin Antibody D2-40 and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Podoplanin antibody, D2-40 antibody, PDPN antibody, Lymphatic Endothelial Marker antibody, gp36 antibody, Glycoprotein 36 antibody

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