

ARG23015 anti-Podoplanin antibody [D2-40]

Package: 250 µl
Store at: -20°C

Summary

Product Description	<p>Mouse Monoclonal antibody [D2-40] recognizes Podoplanin</p> <p>Mouse anti human podoplanin antibody, clone D2-40 was raised against M2A antigen (Marks et al, 1999) and detects podoplanin (Sonne et al, 2006). Podoplanin (PDPN) is an O-glycosylated transmembrane glycoprotein that is selectively expressed by, and is a marker of, lymphatic endothelial cells. In normal tissue the 38 kDa protein is also present in human lung, placenta, heart, skeletal muscle and kidney podocytes. It is not found in the blood vasculature (Breiteneder-Geleff et al, 1999, Wicki and Christofori, 2007). The function of podoplanin is yet to be fully elucidated; however, it may be involved in cell migration and/or actin cytoskeleton organization. It is required for normal lung cell proliferation and alveolus formation at birth, and can induce platelet aggregation (Ramirez et al, 2003, Wicki and Christofori, 2007). Mouse anti human podoplanin antibody, clone D2-40 has been shown to be a sensitive and specific antibody for the detection of lymphatic endothelium in different malignancies, and is of value in the routine evaluation of lymphatic invasion in esophageal cancer (Kozłowski et al, 2011). Clone D2-40 was reported to be an excellent immunohistochemical marker of cutaneous Kaposi's sarcomas, (Kahn et al, 2002), and may be useful in the differential diagnosis of epithelioid malignant mesothelioma versus adenocarcinoma (Chu et al, 2005).</p>
Tested Reactivity	Hu
Tested Application	ICC/IF, IHC-Fr, IHC-P, WB
Host	Mouse
Clonality	Monoclonal
Clone	D2-40
Isotype	IgG1
Target Name	Podoplanin
Species	Human
Immunogen	Resected tissue from dysgerminoma of the ovary
Conjugation	Un-conjugated
Alternate Names	PDPN; T1A2; T1A; GP36; Aggrus; Gp38; T1A-2; Glycoprotein 36; PA2.26 antigen; T1A; AGGRUS; HT1A-1; OTS8; Gp36; PA2.26; T1-alpha; Podoplanin; GP40

Application Instructions

Application table	Application	Dilution
	ICC/IF	Assay-dependent
	IHC-Fr	1:10 - 1:40
	IHC-P	1:10 - 1:40
	WB	Assay-dependent
Application Note	<p>IHC-P: This product does not require protein digestion pre-treatment of paraffin sections.</p> <p>* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.</p>	

Properties

Form	Liquid
Purification	Unpurified.
Buffer	PBS, 0.1% Sodium azide and 1% BSA
Preservative	0.1% Sodium azide
Stabilizer	1% BSA
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	PDPN
Gene Full Name	podoplanin
Background	This gene encodes a type-I integral membrane glycoprotein with diverse distribution in human tissues. The physiological function of this protein may be related to its mucin-type character. The homologous protein in other species has been described as a differentiation antigen and influenza-virus receptor. The specific function of this protein has not been determined but it has been proposed as a marker of lung injury. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008]
Function	May be involved in cell migration and/or actin cytoskeleton organization. When expressed in keratinocytes, induces changes in cell morphology with transfected cells showing an elongated shape, numerous membrane protrusions, major reorganization of the actin cytoskeleton, increased motility and decreased cell adhesion. Required for normal lung cell proliferation and alveolus formation at birth. Induces platelet aggregation. Does not have any effect on folic acid or amino acid transport. Does not function as a water channel or as a regulator of aquaporin-type water channels. [UniProt]
Calculated Mw	17 kDa
PTM	Extensively O-glycosylated. Contains sialic acid residues. O-glycosylation is necessary for platelet aggregation activity. The N-terminus is blocked.