

Rabbit anti-Human, Mouse Podoplanin Polyclonal Antibody | anti-PDPN antibody

Podoplanin Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA323279	Rabbit	Human, Mouse	Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

Podoplanin; Polyclonal Antibody; Podoplanin Antibody; Aggrus; Glycoprotein 36 KD; Glycoprotein 36; gp 36; GP 38; GP 40; gp36; GP38; GP40; HT1A 1; HT1A1; hT1alpha 1; hT1alpha 2; hT1alpha1; hT1alpha2; Lung type I cell membrane associated glycoprotein; Lung type I cell membrane associated glycoprotein isoform a; Lung type I cell membrane associated glycoprotein T1A 2; OTS 8; OTS8; OTTHUMP00000009640; OTTHUMP00000044504; PA2.26; PA2.26 antigen; Pdpn; PDPN_HUMAN; PSEC0003; PSEC0025; T1 alpha; T1 ALPHA GENE; T1-alpha; T1A 2; T1A; T1A1; TIA 2; TIA2; anti-PDPN antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Isotype	IgG
Specificity	Podoplanin antibody detects endogenous levels of Podoplanin.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	120
Applicable Applications for anti-PDPN antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Podoplanin.
Subcellular Location	Membrane. Cell Projection > Filopodium Membrane. Cell Projection > Lamellipodium Membrane. Cell Projection > Microvillus Membrane. Cell Projection > Ruffle Membrane. Localized to actin-rich microvilli and plasma membrane projections such as filopodia, lamellipodia and ruffles.
Tissue Specificity	Highly expressed in placenta, lung, skeletal muscle and brain. Weakly expressed in brain, kidney and liver. In placenta, expressed on the apical plasma membrane of endothelium. In lung, expressed in alveolar epithelium. Up-regulated in colorectal tumors and expressed in 25% of early oral squamous cell carcinomas.
Predicted Cross Reactivity	Dog
Similarity	Dog (83%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)
Western blot analysis of extracts of HEK-293 cells, using Podoplanin antibody.



IHC (Immunohistochemistry)
AAA323279 at 1/100 staining Mouse brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-PDPN antibody	Function: Mediates effects on cell migration and adhesion through its different partners. During development plays a role in blood and lymphatic vessels separation by binding CLEC1B, triggering CLEC1B activation in platelets and leading to platelet activation and/or aggregation (PubMed:14522983, PubMed:15231832, PubMed:17616532, PubMed:18215137, PubMed:17222411). Interaction with CD9, on the contrary, attenuates platelet aggregation induced by PDPN (PubMed:18541721). Through MSN or EZR interaction promotes epithelial-mesenchymal transition (EMT) leading to ERZ phosphorylation and triggering RHOA activation leading to cell migration increase and invasiveness (PubMed:17046996, PubMed:21376833). Interaction with CD44 promotes directional cell migration in epithelial and tumor cells (PubMed:20962267). In lymph nodes (LNs), controls fibroblastic reticular cells (FRCs) adhesion to the extracellular matrix (ECM) and contraction of the actomyosin by maintaining ERM proteins (EZR; MSN and RDX) and MYL9 activation through association with unknown transmembrane proteins. Engagement of CLEC1B by PDPN promotes FRCs relaxation by blocking lateral membrane interactions leading to reduction of ERM proteins (EZR; MSN and RDX) and MYL9 activation (By similarity). Through binding with LGALS8 may participate to connection of the lymphatic endothelium to the surrounding extracellular matrix (PubMed:19268462). In keratinocytes, induces changes in cell morphology showing an elongated shape, numerous membrane protrusions, major reorganization of the actin cytoskeleton, increased motility and decreased cell adhesion (PubMed:15515019). Controls invadopodia stability and maturation leading to efficient degradation of the extracellular matrix (ECM) in tumor cells through modulation of RHOC activity in order to activate ROCK1/ROCK2 and LIMK1/LIMK2 and inactivation of CFL1 (PubMed:25486435). Required for normal lung cell proliferation and alveolus formation at birth (By similarity). Does not function as a water channel or as a regulator of aquaporin-type water channels (PubMed:9651190). Does not have any effect on folic acid or amino acid transport (By similarity). Subunit Structure: Homodimer (PubMed:21376833). Interacts with CLEC1B; the interaction is independent of CLEC1B glycosylation and activates CLEC1B; the interaction is dependent of sialic acid on O-glycans (PubMed:18215137, PubMed:17616532, PubMed:25458834). Interacts with CD9; this interaction is homophilic and attenuates platelet aggregation and pulmonary metastasis induced by PDPN (PubMed:18541721). Interacts with LGALS8; the interaction is glycosylation-dependent; may participate to connection of the lymphatic endothelium to the surrounding extracellular matrix (PubMed:19268462). Interacts with HSPA9 (PubMed:23541579). Interacts (via extracellular domain) with CD44; this interaction is required for PDPN-mediated directional migration and regulation of lamellipodia extension/stabilization during cell spreading and migration (PubMed:20962267). Interacts (via cytoplasmic domain) with MSN and EZR; activates RHOA and promotes epithelial-mesenchymal transition (PubMed:17046996). Interacts with CCL21; relocalized PDPN to the basolateral membrane (PubMed:14978162). Post-translational Modifications: Extensively O-glycosylated. Contains sialic acid residues. O-glycosylation is necessary for platelet aggregation activity. Disialylated at Thr-52; sialic acid is critical for platelet-aggregating activity and for CLEC1B interaction (PubMed:17222411, PubMed:25458834). The N-terminus is blocked. Cleaved by a metalloprotease within its extracellular (EC) domain, generating a membrane-bound C-terminal fragment (PCTF33) and an extracellular fragment. The resulting membrane-bound C-terminal fragment (PCTF33) is further processed between Val-150 and Val-151 by PSEN1/gamma-secretase generating the intracellular domain of podoplanin (PICD). Similarity: The cytoplasmic domain controls FRC elongation but is dispensable for contraction (By similarity). The cytoplasmic domain is essential for recruitment to invadopodia and ECM degradation (PubMed:25486435). Belongs to the podoplanin family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	54792060
NCBI GeneID	10630
NCBI Accession #	NP_001006625.1

NCBI GenBank Nucleotide #	NM_001006624.1
UniProt Accession #	Q86YL7; O60836; O95128; Q7L375; Q8NBQ8; Q8NBR3; A9Z1Y2; B2R6J8; E9PB68; F6QWX5
Molecular Weight	Observed: 43 kDa Predicted: 17 kDa
NCBI Official Full Name	podoplanin isoform c
NCBI Official Synonym Full Names	podoplanin
NCBI Official Symbol	PDPN
NCBI Official Synonym Symbols	T1A; GP36; GP40; Gp38; OTS8; T1A2; T11A; T1A-2; AGGRUS; HT1A-1; PA2.26
NCBI Protein Information	podoplanin
UniProt Protein Name	Podoplanin
UniProt Gene Name	PDPN
UniProt Synonym Gene Names	Gp361 PublicationManual assertion based on opinion iniRef.2; T1ABBy similarityManual assertion inferred from sequence similarity toiUniProtKB:Q64294Â (PDPN_RAT); PICD1 PublicationManual assertion based on opinion iniRef.11

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/podoplanin-antibody-immunohistochemistry-western-blot-elisa/323279>