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Podoplanin Rabbit pAb

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Catalog # AP94535

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q62011
Reactivity	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	18233
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse Podoplanin
Epitope Specificity	91-166/166
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Membrane; Single-pass type I membrane protein. Cell projection, filopodium membrane; Single-pass type I membrane protein. Cell projection, lamellipodium membrane; Single-pass type I membrane protein. Cell projection, microvillus membrane; Single-pass type I membrane protein. Cell projection, ruffle membrane; Single-pass type I membrane protein. Note=Localized to actin-rich microvilli and plasma membrane projections such as filopodia, lamellipodia and ruffles.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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]

Additional Information

Gene ID	14726
Other Names	Podoplanin, Pdpn {ECO:0000312|MGI:MGI:103098}
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

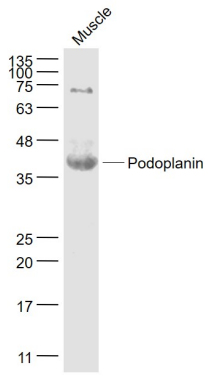
Name	Pdpn {ECO:0000312|MGI:MGI:103098}
Function	Mediates effects on cell migration and adhesion through its different partners. During development plays a role in blood and lymphatic vessels separation by binding CLEC1B, triggering CLEC1B activation in platelets and leading to platelet activation and/or aggregation (PubMed:14522983, PubMed:15231832, PubMed:17616532, PubMed:20110424). Interaction with CD9, on the contrary, attenuates platelet aggregation and pulmonary metastasis induced by PDPN. Mediates effects on cell migration and adhesion through its different partners. 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. Interaction with CD44 promotes directional cell migration in epithelial and tumor cells (By similarity). 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 (PubMed:25347465). Through binding with LGALS8 may participate in connection of the lymphatic endothelium to the surrounding extracellular matrix (By similarity). 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:10574709). 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 (By similarity). Required for normal lung cell proliferation and alveolus formation at birth (PubMed:12654292). Does not function as a water channel or as a regulator of aquaporin-type water channels (By similarity). Does not have any effect on folic acid or amino acid transport (PubMed:12032185).
Cellular Location	Membrane; Single- pass type I membrane protein. Cell projection, lamellipodium membrane; Single-pass type I membrane protein. Cell projection, filopodium membrane; Single-pass type I membrane protein. Cell projection, microvillus membrane; Single-pass type I membrane protein. Cell projection, ruffle membrane; Single-pass type I membrane protein. Membrane raft {ECO:0000250|UniProtKB:Q86YL7}. Apical cell membrane {ECO:0000250|UniProtKB:Q86YL7}. Basolateral cell membrane {ECO:0000250|UniProtKB:Q86YL7}. Cell projection, invadopodium {ECO:0000250|UniProtKB:Q86YL7}. Note=Localized to actin-rich microvilli and plasma membrane projections such as filopodia, lamellipodia and ruffles (PubMed:10574709). Association to the lipid rafts is required for PDPN-induced epithelial to mesenchymal transition (EMT) Colocalizes with CD9 in tetraspanin microdomains. Localized at invadopodium adhesion rings in tumor cell. Association to the lipid rafts is essential for PDPN recruitment to invadopodia and ECM degradation (By similarity). {ECO:0000250|UniProtKB:Q86YL7, ECO:0000269|PubMed:10574709}
Tissue Location	Detected at high levels in lung and brain, at lower levels in kidney, stomach, liver, spleen and esophagus, and not detected in skin and small intestine. Expressed in epithelial cells of choroid plexus, ependyma, glomerulus and alveolus, in mesothelial cells and in endothelia of lymphatic vessels. Also expressed in stromal cells of peripheral lymphoid tissue and thymic epithelial cells. Detected in carcinoma cell lines and cultured fibroblasts. Expressed at

higher levels in colon carcinomas than in normal colon tissue

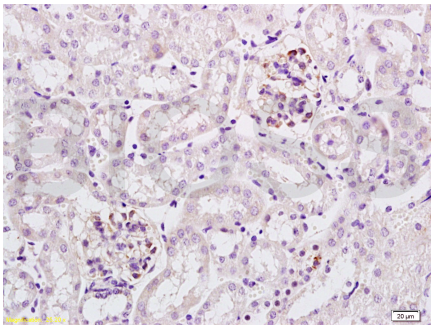
Background

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Images



Sample:
Muscle (Mouse) Lysate at 40 ug
Primary: Anti- Podoplanin (AP94535) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 15 kD
Observed band size: 37 kD



Tissue/cell: mouse kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-Podoplanin Protein/gp36 Polyclonal Antibody, Unconjugated(AP94535) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.