



PDPN Antibody

Product Code	CSB-RA017739A0HU
Abbreviation	Podoplanin
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q86YL7
Immunogen	A synthesized peptide derived from human PDPN
Species Reactivity	Human
Tested Applications	ELISA
Relevance	<p>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).</p>
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.



Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Podoplanin, Aggrus, PDPN
Immunogen Species	Homo sapiens (Human)
Research Area	Cardiovascular
Gene Names	PDPN
Accession NO.	4E6

Description

The recombinant PDPN antibody is a monoclonal antibody made in vitro using the PDPN antibody genes that are typically expressed from a plasmid in a stable mammalian cell line. The genes coding for the PDPN antibody will ultimately assemble into a fully functional antibody after translation. The synthesized antibody is the recombinant antibody against PDPN. It underwent purification using affinity-chromatography. This recombinant PDPN antibody is suitable for use in the ELISA to detect the PDPN protein from Human.

PDPN is a cell-surface mucin-like glycoprotein with pleiotropic functions including regulation of organ development, cell motility, tumorigenesis, and metastasis. Overexpression of PDPN is detected in several tumors and is involved in their malignancy and metastasis. PDPN is widely used as a marker for lymphatic endothelial cells and fibroblastic reticular cells of lymphoid organs and for lymphatics in the skin and tumor microenvironment.