

Recombinant Mouse Pdpn Protein

Cat. No. Pdpn-7215M **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Mouse soluble Podoplanin protein without tag was expressed in E. coli.

Species Mouse

Source E.coli

Description

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. 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. 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. Through binding with LGALS8 may participate in connection of the lymphatic endothelium to the surrounding extracellular matrix. In keratinocytes, induces changes in cell morphology showing an elongated shape, numerous membrane protrusions, major

 Tel: 1-631-559-9269 1-516-512-3133

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reorganization of the actin cytoskeleton, increased motility and decreased cell adhesion. 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. Required for normal lung cell proliferation and alveolus formation at birth. Does not function as a water channel or as a regulator of aquaporin-type water channels. Does not have any effect on folic acid or amino acid transport.

Form	Lyophilized
Molecular Mass	13.42 kDa
AA Sequence	GTIGVNEDDIVTPGTGDGMVPPGIEDKITTGATGGLNESTGKAPLVPTQRERGTKP PLEELSTSATSDDHREHESTTTVKVVTSHSVDKKTSHPNRDNAGDETQTDDKKDG LPVVTLEHHHHHHN-terminalsequence:GTIGVNEDDIVTPGT
Endotoxin	< 0.1 ng/μg of Mouse soluble Podoplanin
Purity	> 98 %
Storage	The lyophilized protein is stable for a few weeks at room temperature, but best stored at -20 centigrade. Reconstituted soluble Podoplanin should be stored in working aliquots at -20 centigrade. Avoid repeated freeze-thaw cycles.
Storage Buffer	PBS without stabilizers
Reconstitution	We recommend a quick spin followed by reconstitution in water to a concentration of 0.1-1.0 mg/mL. This solution can then be diluted into other aqueous buffers and

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stored at 4 centigrade for 1 week or -20 centigrade for future use.

GENE INFORMATION

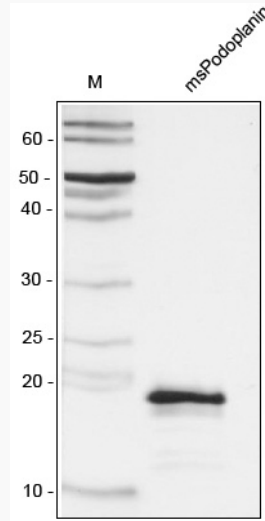
Gene Name	Pdpn podoplanin [<i>Mus musculus</i> (house mouse)]
Official Symbol	Pdpn
Synonyms	Pdpn; podoplanin; T1; E11; Gp3; OTS; T1a; Gp38; PA2.; RAND; OTS-8; T1alpha; RANDAM-2; T1-alpha; podoplanin; PA2.26 antigen; aggrus; glycoprotein 38; transmembrane glycoprotein E11
Gene ID	14726
mRNA Refseq	NM_001290822
Protein Refseq	NP_001277751
UniProt ID	Q62011

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