

Product datasheet for MR228197

Podoplanin (PDPN) (NM_001290822) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Podoplanin (PDPN) (NM_001290822) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: PDPN
Synonyms: Gp38; OTS-8; RANDAM-2; T1-alpha; T1a; T1alpha
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >MR228197 representing NM_001290822
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAAACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGTGGACCGTGCCAGTGTGTTCTGGGTTTTGGGGAGCGTTTGGTTCTGGGACTCTGCGCAGGGAGGGA
CTATAGGCGTGAATGAAGATGATATTGTGACCCAGGTACAGGAGACGGCATGGTCCCCCAGGTATAGA
AGACAAAATAACAACCACAGGTGCTACTGGAGGGCTTAATGAATCTACTGGCAAGGCACCTCTGGTACCA
ACGCAGAGAGAGCGTGGGACGAAGCCTCCCTTAGAGGAAGTCCACCTCAGCAACCTCAGACCATGATC
ACAGAGAACACGAGAGTACAACCACTGTCAAAGTGGTACTAGCCACTCTGTGGACAAGAAAACAAGTCA
CCCCAATAGAGATGGCTTGCCAGTAGTCACCCTGGTTGGAATCATAGTTGGCGTCTTGTTAGCCATTGGC
TTCGTCGGAGGGATCTTCATTGTTGTTATGAAGAAGATTCTGGAAGGTTCTCGCCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR228197 representing NM_001290822
Red=Cloning site Green=Tags(s)

MWTVPVLFVWLGSVWFWSAQGGTIGVNEDDIVPTGTDGMVPPGIEDKITTTGATGGLNESTGKAPLVP
 TQRERGTKPPEELSTSATSDHDHREHESTTTKVVTSHSVDKKTSHPNRDGLPVVTLVGIIVGVLIAIG
 FVGIGIFIVMKKISGRFSP

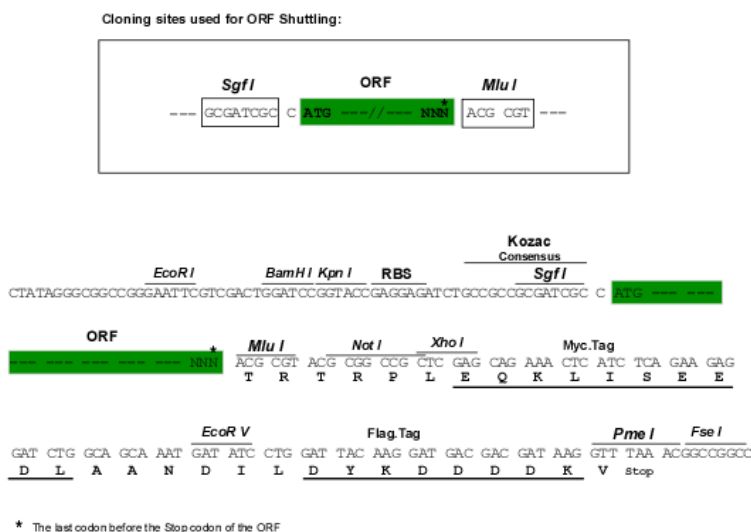
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI



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Cloning Scheme:



ACCN: NM_001290822

ORF Size: 477 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001290822.1](#), [NP_001277751.1](#)

RefSeq Size: 1800 bp

RefSeq ORF: 480 bp

Locus ID: 14726

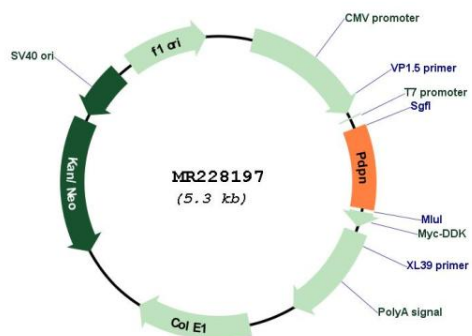
UniProt ID: Q62011

Cytogenetics: 4 E1

MW: 17.3 kDa

Gene Summary: 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:20110424, PubMed:17616532). 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 to 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).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR228197