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Product datasheet for TR501119

Itgb1bp1 Mouse shRNA Plasmid (Locus ID 16413)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Itgb1bp1 Mouse shRNA Plasmid (Locus ID 16413)
Locus ID:	16413
Synonyms:	AI449260; AU019480; Icap1
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	Itgb1bp1 - Mouse, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 16413). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	BC028772, NM_008403, NM_001355609, NM_008403.1, NM_008403.2, NM_008403.3, NM_008403.4, BC021151, NM_008403.5
UniProt ID:	O35671

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Summary:

Key regulator of the integrin-mediated cell-matrix interaction signaling by binding to the ITGB1 cytoplasmic tail and preventing the activation of integrin alpha-5/beta-1 (heterodimer of ITGA5 and ITGB1) by talin or FERMT1. Plays a role in cell proliferation, differentiation, spreading, adhesion and migration in the context of mineralization and bone development and angiogenesis. Stimulates cellular proliferation in a fibronectin-dependent manner. Involved in the regulation of beta-1 integrin-containing focal adhesion (FA) site dynamics by controlling its assembly rate during cell adhesion; inhibits beta-1 integrin clustering within FA by directly competing with talin TLN1, and hence stimulates osteoblast spreading and migration in a fibronectin-and/or collagen-dependent manner. Acts as a guanine nucleotide dissociation inhibitor (GDI) by regulating Rho family GTPases during integrin-mediated cell matrix adhesion; reduces the level of active GTP-bound form of both CDC42 and RAC1 GTPases upon cell adhesion to fibronectin. Stimulates the release of active CDC42 from the membranes to maintain it in an inactive cytoplasmic pool. Participates in the translocation of the Rho-associated protein kinase ROCK1 to membrane ruffles at cell leading edges of the cell membrane, leading to an increase of myoblast cell migration on laminin. Plays a role in bone mineralization at a late stage of osteoblast differentiation; modulates the dynamic formation of focal adhesions into fibrillar adhesions, which are adhesive structures responsible for fibronectin deposition and fibrillogenesis. Plays a role in blood vessel development; acts as a negative regulator of angiogenesis by attenuating endothelial cell proliferation and migration, lumen formation and sprouting angiogenesis by promoting AKT phosphorylation and inhibiting ERK1/2 phosphorylation through activation of the Notch signaling pathway. Promotes transcriptional activity of the MYC promoter.[UniProtKB/Swiss-Prot Function]

shRNA Design:

These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our custom shRNA service.

Performance Guaranteed:

OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.

For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at techsupport@origene.com. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).