

Product datasheet for MG202029

Itgb1bp1 (BC028772) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Itgb1bp1 (BC028772) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Itgb1bp1
Synonyms: AI449260; AU019480; Icap1
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG202029 representing BC028772
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAACTACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGTTTCGCAAAGGCAAGAAGAGACACAGCAGCAGCAGTCCCAGAGCAGTGAAATCAGTACAAAGAGCA
 AGTCTGTGGATCCAGCCTTGGAGGACTTTCAAGATCCAGCACTGTCGCCAGCCTCGATACAGACTCCAC
 TAAAGCTCAGGACAGAGTAACAGCAATTTAGACACATGTGCTGAGTTCCGAATAAAGTATGTTGGTGCC
 ATCGAGAAACTGGCCGTGTCTGAGGGGAAGAGCCTTGAAGGACCACTAGACCTGATAAATTACATAGATG
 TCGCCAGCAAGATGGAAGTTGCCTTTTGTGCCTTTGGAAGAGGAGTTCATTCTGGGCGTTTCTAAGTA
 CGGCATAAAAGTCTCGACCACGGATCAGCATGGTGTCTGCATAGGCATGCCCTGTATCTAATCATCCGG
 ATGGTGTGTTACGATGACGGCCTGGGAGCTGGGAAAAGCTTGTGGCACTCAAGACCACAGATGCAAGCA
 ACGAAGAGTACAGCCTGTGGGTTTACCAGTGTAACAGCCTGGAGCAAGCCCAAGCAATCTGCAAGGTCTT
 ATCCACAGCATTTGACTCTGTGTTGACCTCTGACAAGTCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG202029 representing BC028772
 Red=Cloning site Green=Tags(s)

MFRKGKKRHSSSSQSSEISTKSKSVDSLSLGLSRSSSTVASLDTSTKSSGQSNLNLDCAEFRIKYVGA
 IEKLAVSEGKSLEGPLDLINYIDVAQQDGKLPFVPLEEEFILGVSKYGIKVSTTDQHGVLHRHALYLIIR
 MVCYDDGLGAGKSLALKTTDASNEEYSLWVYQCNLSLEQAQAICKVLSTAFDSVLTSDKS

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI



[View online »](#)

Cloning Scheme:


ACCN: BC028772

ORF Size: 600 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: [BC028772](#), [AAH28772](#)

RefSeq Size: 837 bp

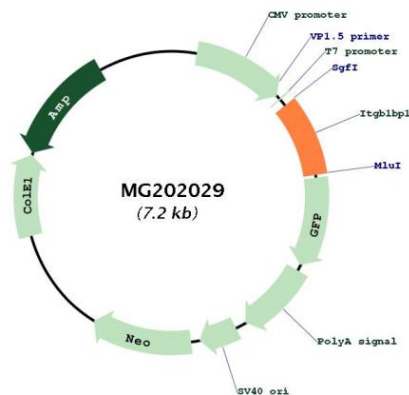
RefSeq ORF: 602 bp

Locus ID: 16413

Cytogenetics: 12 A1.3

Gene 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]

Product images:



Circular map for MG202029