

Product datasheet for **MG227073**

Itgb1 (NM_010578) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Itgb1 (NM_010578) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Itgb1
Synonyms:	4633401G24Rik; AA409975; AA960159; CD29; ENSMUSG00000051907; Fnrb; Gm9863; gpIIa
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MG227073 representing NM_010578
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAATTTGCAACTGGTTTCCTGGATTGGATTGATCAGTTTGATTGTTCTGATTTGGCCAACAGATA
 AAAATAGATGTTTAAAAGCAAATGCCAAATCTTGCAGGAGAAATGTATACAAGCAGGGCCAAATTTGGGGT
 GTGTACAATACGACATTTTTGCAAGAAGGAATGCCTACTTCTGCACGATGTGATGATTTAGAAGCTTTG
 AAAAGAAGGGTTGCCAGCCAAGTGACATAGAGAATCCCAGAGGCTCTCAAATAAAAGAAAAATAAAA
 ATGTCACCAATCGCAGCAAAGGGATGGCAGAGAAGCTCCGGCCAGAAGACATTACTCAGATCCAACCACA
 ACAGCTGCTTCTAAAATTGAGATCAGGAGAACCACAGAAGTTTACATTAATAAAGAGGGCTGAAGAT
 TACCCTATTGATCTCTACTACCTTATGGATCTCTCCTACTCTATGAAAGATGATCTGGAGAATGTGAAA
 GTCTTGGAACGGATTTGATGAATGAAATGAGGAGGATTACTTCAGACTTCCGCATTGGCTTTGGCTCATT
 TGTGGAGAAAACGTGATGCCGTATATTAGCACAAACCCAGCAAAGCTAAGAAATCCTTGTACAAGTGAA
 CAAAACCTGCACAGCCATTTAGCTACAAAAATGTGCTTAGTCTTACTGACAGAGGAGATTTTTCAATG
 AACTTGTGGTGCAGCAACGCATATCTGGAACTTGGATTCTCCAGAAGGTGGCTTTGATGCAATCATGCA
 GGTTGCGGTTTGTGGATCGCTGATTGGCTGGAGGAATGTAACACGACTGCTGGTGTTCACCGGATGCT
 GGGTTTCACTTTGCTGGAGATGGGAACTTGGTGGTATTGTTTTACCCAATGATGGACAATGTCACCTGG
 AAAATAATGTATATACAATGAGCCATTACTATGATTATCCTTCAATTGCTCACCTTGTTCAGAACTAAG
 TGAAAAAATATTCAGACGATTTTGCAGTTACTGAAGAGTTCCAACCTGTTTACAAGGAATTGAAGAAT
 TTGATTCCTAAGTCAGCAGTGGGCACACTGTCTGGAACTCTAGTAATGTATCCAGCTAATCATCGATG
 CCTACAACCTCTTTTCTCAGAAGTCATTCTGGAAAATAGCAAATGCCAGACGGAGTAAACAATAAATTA
 CAAATCCTATTGCAAGAATGGGGTGAATGGGACAGGAGAAAAATGGACGAAAGTGTCCAACATTTCTATT
 GGAGATGAGGTTCAATTTGAAATTAGCATAACTGCTAATAAATGTCCAATAAGGAGTCTGAAACCATTA
 AAATTAACCTCTGGCTTCACTGAAGAAGTAGAGGTCGTTCTTCACTCATCTGTAAGTGAATTTGCA
 AAGCCATGGCATCCCAGCCAGTCCCAAGTCCATGAGGGAAATGGGACATTTGAGTGTGGAGCCTGCAGG
 TGCAATGAGGGCGTGTGGGAGGCACTGTGAATGTAGCACAGATGAAGTGAACAGTGAAGACATGGACG
 CTTACTGCAGGAAAGAGAACAGTTCGGAAATCTGCAGTAACAATGGAGAATGTGCTGTGGACAGTGTG
 GTGTAGGAAGAGAGATAATAACAATGAAATTTACTCTGGAAAATCTGCGAGTGTGATAACTTCACTGT
 GATAGGCTAATGGCTTAATTTGTGGAGGCAATGGCGTGTGCAGGTGTCGTGTTTGTGAATGCTATCCCA
 ATTACACTGGCAGTGCATGTGACTGTTCTTTGGCACTGGTCCATGTCTAGCGTCAAATGGTCAGATCTG
 CAATGGCCGGGGTATTTGTGAATGTGGTCTTGTAAAGTGACAGATCCCAAGTTTCAAGGGCCAACCTGT
 GAGACATGTCAGACCTGCCTTGGCGTCTGTGCAGAGCATAAAGAATGTGTTCACTGCAGAGCCTTCAATA
 AAGGAGAAAAGAAAGACAGTGTGCACAGGAGTGTCCCACTTCAATCTCACAAAGTAGAAAGCAGGGA
 GAAGTTGCCCCAGCCGGTGCAGGTGCATCCTGTGACCCATTGCAAGGAGAAGGACATTGATGACTGCTGG
 TTCTATTTACCTATTCAGTGAATGGCAACAATGAAGCTATCGTGCATGTTGTGGAGACTCCAGACTGTC
 CTACTGGTCCCAGACATCATCCAATTTAGCAGGCGTGGTTGCTGGAATGTTCTTATTGGCCTTGCCTT
 GCTGCTGATTTGAAAACTTTTAATGATAATTCATGACAGAAGGGAATTTGCTAAATTTGAAAAGGAGAAA
 ATGAATGCCAAGTGGGACACGGGTGAAAATCCTATTTACAAGAGTGCCGTGACAACCTGTGGTCAATCCGA
 AGTATGAGGGAAAA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >MG227073 representing NM_010578
 Red=Cloning site Green=Tags(s)

```

MNLQLVSWIGLISLICSVFGQTDKNRCLKANAKSCGECIQAGPNCGWCTNTTFLQEGMPTSARCCDDLEAL
KKKGCQPSDIENPRGSQTIKKKNKVTNRSKGMAEKLRPEDITQIQPQQLLKLRSGEQKFTLKFKAED
YPIDLYLMDLSYSMKDDLENVKSLGTDLMNEMRRITSDFRIGFGSFVEKTVMPYISTTPAKLRNPCTSE
QNCTSPFSYKNVLSLTDRGEFFNELVGQQRISGNLDSPEGGFDAIMQVAVCGSLIGWRNVTRLLVFSTDA
GFHFAGDGKLGGI VLPNDGQCHLENNVYTM SHYYDYP SIAHLVQKLS ENNIQTIFAVTEEFQPVYKELKN
LIPKSAVGTLSGNSSNVIQLIIDAYNSLSSEVILENSKLPDGV TINYKSYCKNGVNGTGENGRKCSNISI
GDEVQFEISITANKCPNKESETIKIKPLGFTEEVEVVLQFICKCNCQSHGIPASPKCHEGNGTFECGACR
CNEGRVGRHCECSTDEVNSEMDAYCRKENSSEICSNNGECVCGQCVCRKRDNTNEIYSGKFCECDNFNC
DRSNGLICGGNGVCRVCECYPNYTGSACDCSLDTGPCLASNGQICNGRGI CECGACKCTDPKFQGP TC
ETCQTCLGVCAEHKECVQCRAFNGEKKDTCAQEC SHFNLTKVESREKLPQPVQVDPVTHCKEKDIDDCW
FYFTYSVNGNNEAIVHV VETPDCPTGPDIIPIVAGVVAGIVLIGLALLLIWKL LMIIHDRREFAKFEKEK
MNAKWDGTGENPIYKSAVTTVVNPKYEGK
  
```

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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.

RefSeq: [NM_010578.2](#), [NP_034708.1](#)

RefSeq Size: 4194 bp

RefSeq ORF: 2397 bp

Locus ID: 16412

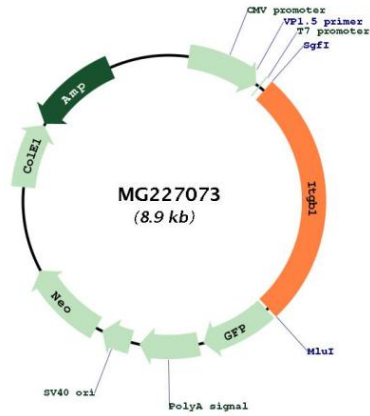
UniProt ID: [P09055](#)

Cytogenetics: 8 E2

Gene Summary:

Integrins alpha-1/beta-1, alpha-2/beta-1, alpha-10/beta-1 and alpha-11/beta-1 are receptors for collagen. Integrins alpha-1/beta-1 and alpha-2/beta-2 recognize the proline-hydroxylated sequence G-F-P-G-E-R in collagen. Integrins alpha-2/beta-1, alpha-3/beta-1, alpha-4/beta-1, alpha-5/beta-1, alpha-8/beta-1, alpha-10/beta-1, alpha-11/beta-1 and alpha-V/beta-1 are receptors for fibronectin. Alpha-4/beta-1 recognizes one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. Integrin alpha-5/beta-1 is a receptor for fibrinogen. Integrin alpha-1/beta-1, alpha-2/beta-1, alpha-6/beta-1 and alpha-7/beta-1 are receptors for laminin. Integrin alpha-6/beta-1 (ITGA6:ITGB1) is present in oocytes and is involved in sperm-egg fusion (PubMed:10634791). Integrin alpha-4/beta-1 is a receptor for VCAM1 and recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-9/beta-1 is a receptor for VCAM1, cytotactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytotactin. Integrin alpha-3/beta-1 is a receptor for epiligrin, thrombospondin and CSPG4. Integrin alpha-3/beta-1 provides a docking site for FAP (seprase) at invadopodia plasma membranes in a collagen-dependent manner and hence may participate in the adhesion, formation of invadopodia and matrix degradation processes, promoting cell invasion. Alpha-3/beta-1 may mediate with LGALS3 the stimulation by CSPG4 of endothelial cells migration. Integrin alpha-V/beta-1 is a receptor for vitronectin. Beta-1 integrins recognize the sequence R-G-D in a wide array of ligands. When associated with alpha-7/beta-1 integrin, regulates cell adhesion and laminin matrix deposition (PubMed:12941630). Involved in promoting endothelial cell motility and angiogenesis (PubMed:15181153). Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process and the formation of mineralized bone nodules (PubMed:21768292). May be involved in up-regulation of the activity of kinases such as PKC via binding to KRT1. Together with KRT1 and RACK1, serves as a platform for SRC activation or inactivation. Plays a mechanistic adhesive role during telophase, required for the successful completion of cytokinesis (PubMed:18804435). ITGA4:ITGB1 binds to fractalkine (CX3CL1) and may act as its coreceptor in CX3CR1-dependent fractalkine signaling (By similarity). ITGA4:ITGB1 and ITGA5:ITGB1 bind to PLA2G2A via a site (site 2) which is distinct from the classical ligand-binding site (site 1) and this induces integrin conformational changes and enhanced ligand binding to site 1 (By similarity). ITGA5:ITGB1 acts as a receptor for fibrillin-1 (FBN1) and mediates R-G-D-dependent cell adhesion to FBN1 (By similarity). ITGA5:ITGB1 is a receptor for IL1B and binding is essential for IL1B signaling (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG227073