

Product datasheet for **MC221694**

Itgb1 (NM_010578) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Itgb1 (NM_010578) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Itgb1
Synonyms:	4633401G24Rik; AA409975; AA960159; CD29; ENSMUSG00000051907; Fnrb; Gm9863; gpIIa
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC221694 representing NM_010578
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAATTTGCAACTGGTTTCCTGGATTGGATTGATCAGTTTGATTGTTCTGTATTTGGCCAACAGATA
 AAAATAGATGTTTAAAAGCAAATGCCAAATCTTGCAGGAGAATGTATACAAGCAGGGCCAAATTTGGGGT
 GTGTACAATACGACATTTTTGCAAGAAGGAATGCCTACTTCTGCACGATGTGATGATTTAGAAGCTTTG
 AAAAGAAGGGTTGCCAGCCAAGTGACATAGAGAATCCCAGAGGCTCTCAAATAAAAGAAAAATAAAA
 ATGTCACCAATCGCAGCAAAGGGATGGCAGAGAAGCTCCGGCCAGAAGACATTACTCAGATCCAACCACA
 ACAGCTGCTTCTAAAATTGAGATCAGGAGAACCACAGAAGTTTACATTAATAAAGAGGGCTGAAGAT
 TACCCTATTGATCTCTACTACCTTATGGATCTCTCCTACTCTATGAAAGATGATCTGGAGAATGTGAAA
 GTCTTGGAACGGATTTGATGAATGAAATGAGGAGGATTACTTCAGACTTCCGCATTGGCTTTGGCTCATT
 TGTGGAGAAAACGTGATGCCGTATATTAGCACAAACCCAGCAAAGCTAAGAAATCCTTGTACAAGTGAA
 CAAAACCTGCACCAGCCATTTAGCTACAAAAATGTGCTTAGTCTTACTGACAGAGGAGAGTTTTCAATG
 AACTTGTGGTGCAGCAACGCATATCTGGAACTTGGATTCTCCAGAAGGTGGCTTTGATGCAATCATGCA
 GTTTGGCGTTTGTGGATCGCTGATTGGCTGGAGGAATGTAACACGACTGCTGGTGTTCACCGGATGCT
 GGGTTTCACTTTGCTGGAGATGGGAACTTGGTGGTATTGTTTTACCCAATGATGGACAATGTCACCTGG
 AAAATAATGTATATAATGAGCCACTACTATGATTATCCTTCAATTGCTCACCTTGTTCAGAACTAAG
 TGAAAAAATATTCAGACGATTTTGCAGTTACTGAAGAGTTCCAACCTGTTTACAAGGAATTGAAGAAT
 TTGATTCCTAAGTCAGCAGTGGGCACACTGTCTGGAACTCTAGTAATGTGATCCAGCTAATCATCGATG
 CCTACAACCTCTTTCTCAGAAGTCAATCTGGAAAAATAGCAAATGGCAGACGGAGTAAACAATAAATTA
 CAAATCCTATTGCAAGAATGGGGTGAATGGGACAGGAGAAAAATGGACGAAAGTGTCCAACATTTCTATT
 GGAGATGAGGTTCAATTTGAAATTAGCATAACTGCTAATAAATGTCCAATAAGGAGTCTGAAACCATTA
 AAATTAACCTCTGGCTTCACTGAAGAAGTAGAGGTCGTTCTTCACTCATCTGTAAGTGAATTTGCA
 AAGCCATGGCATCCCAGCCAGTCCCAAGTCCCATGAGGGAAATGGGACATTTGAGTGTGGAGCCTGCAGG
 TGCAATGAGGGCGTGTGGGAGGCACTGTGAATGTAGCACAGATGAAGTGAACAGTGAAGACATGGACG
 CTTACTGCAGGAAAGAGAACAGTTCGGAAATCTGCAGTAACAATGGAGAATGTGCTGTGGACAGTGTGT
 GTGTAGGAAGAGAGATAATAACAATGAAATTTACTCTGGAAAATCTGCGAGTGTGATAACTTCACTGT
 GATAGGTCTAATGGCTTAATTTGTGGAGCAATGGCGTGTGCAGGTGTCGTGTTTGTGAATGCTATCCCA
 ATTACACTGGCAGTGCATGTGACTGTTCTTTGGCACTGGTCCATGTCTAGCGTCAAATGGTCAGATCTG
 CAATGGCCGGGGTATTTGTGAATGTGGTCTTGTAAAGTGACAGATCCCAAGTTTCAAGGGCCAACCTGT
 GAGACATGTCAGACCTGCCTTGGCGTCTGTGCAGAGCATAAAGAATGTGTTCACTGCAGAGCCTTCAATA
 AAGGAGAAAAGAAAGACAGTGTGCACAGGAGTCTCCCACTTCAATCTCACAAAGTAGAAAGCAGGGA
 GAAGTTGCCCCAGCCGGTGCAGGTCGATCCTGTGACCCATTGCAAGGAGAAGGACATTGATGACTGCTGG
 TTCTATTTACCTATTCAGTGAATGGCAACAATGAAGCTATCGTGCATGTTGTGGAGACTCCAGACTGTC
 CTACTGGTCCCAGACATCATCCCAATTGTAGCAGGCGTGGTTGCTGGAATGTTCTTATTGGCCTTGCTT
 GCTGCTGATTTGGAACTTTTAATGATAATTCATGACAGAAGGGAATTTGCTAAATTTGAAAAGGAGAAA
 ATGAATGCCAAGTGGGACACGGGTGAAAATCCTATTTACAAGAGTGCCGTGACAACCTGTGGTCAATCCGA
 AGTATGAGGGAAAA**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_010578
Insert Size: 2397 bp

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](#)

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]