

Product datasheet for **MR227073**

Itgb1 (NM_010578) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Itgb1 (NM_010578) Mouse Tagged ORF Clone
Tag:	Myc-DDK
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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ORF Nucleotide Sequence:

>MR227073 representing NM_010578
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAATTTGCAACTGGTTTCCTGGATTGGATTGATCAGTTTGATTGTTCTGATTTGGCCAACAGATA
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 ATGTCACCAATCGCAGCAAAGGGATGGCAGAGAAGCTCCGGCCAGAAGACATTACTCAGATCCAACCACA
 ACAGCTGCTTCTAAAATTGAGATCAGGAGAACCACAGAAGTTTACATTAATAAAGAGGGCTGAAGAT
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 GTTTGGCGTTTGTGGATCGCTGATTGGCTGGAGGAATGTAACACGACTGCTGGTGTTTCCACGGATGCT
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 ATTACACTGGCAGTGCATGTGACTGTTCTTTGGCACTGGTCCATGTCTAGCGTCAAATGGTCAGATCTG
 CAATGGCCGGGGTATTTGTGAATGTGGTCTTGTAAAGTGCACAGATCCCAAGTTTCAAGGGCCAACCTGT
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 AAGGAGAAAAGAAAGACAGTGTGCACAGGAGTCTCCCACTTCAATCTCACAAAGTAGAAAGCAGGGA
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
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Protein Sequence: >MR227073 representing NM_010578
Red=Cloning site Green=Tags(s)

MNLQLVSWIGLISLICSVFGQTDKNRCLKANAKSCGECIQAGPNCGWCTNTTFLQEGMPTSARCDLLEAL
KKKGCQPSDIENPRGSQTIKKNKNVTNRSKGMAEKLRPEDITQIQPQQLLKLRSGEQKFTLKFRAED
YPIDLYLMDLSYSMKDDLENVKSLGTDLMNEMRRITSDFRIGFGSFVEKTVMPYISTTPAKLRNPCTSE
QNCTSPFSYKNVLSLTDGEFFNELVGQQRISGNLDSPEGGFDAIMQVAVCGSLIGWRNVTRLLVFSTDA
GFHFAGDGKLGGI VLPNDGQCHLENNVYTM SHYYDYP SIAHLVQKLSENNIQTIFAVTEEFQPVYKELKN
LIPKSAVGTLSGNSSNVIQLIIDAYNSLSSEVILENSKLPDGV TINYKSYCKNGVNGTGENGRKCSNISI
GDEVQFEISITANKCPNKESETIKIKPLGFTEEVEVVLQFICKCNCQSHGIPASPKCHEGNGTFECGACR
CNEGRVGRHCECSTDEVNSEMDAYCRKENSSEICSNNGECVCGQCVCRKRDNTNEIYSGKFCECDNFNC
DRSNGLICGGNGVCRVCECYPNYTGSACDCSLDTGPCLASNGQICNGRGI CECGACKCTDPKFQGP TC
ETCQTCLGVCAEHKECVQCRAFNGEKKDTCAQEC SHFNLTKVESREKLPQP VQVDPVTHCKEKDIDDCW
FYFTYSVNGNNEAIVHV VETPDCPTGPDIIPIVAGVVAGIVLIGLALLLIWKL LMIHDRREFAKFEKEK
MNAKWDGTGENPIYKSAVTTVVNPKYEGK

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9026_f05.zip

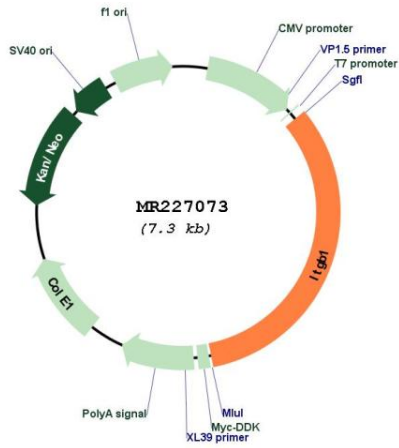
Restriction Sites: Sgfl-Mlul

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:	<ol style="list-style-type: none">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:	<u>NM_010578.2</u> , <u>NP_034708.1</u>
RefSeq Size:	4194 bp
RefSeq ORF:	2397 bp
Locus ID:	16412
UniProt ID:	<u>P09055</u>
Cytogenetics:	8 E2
MW:	88.7 kDa

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 MR227073