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Product datasheet for MR227348

Itgb3 (NM_016780) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Itgb3 (NM_016780) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Itgb3
Synonyms:	CD61; GP3A; INGRB3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR227348 representing NM_016780
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCGAGCGCAGTGGCCGGGACAACTCTGGGCCGCTCTGCTGGCGCTGGGGGCGCTGGCGGGCGTTGTTG
TTGGAGAGTCCAACATCTGTACCACACGAGGCGTGAACTCCTGCCAGCAGTGTCTGGCTGTGAGTCCTGT
GTGTGCCTGGTGCTCAGATGAGACTTTGTCTCAGGGCTCACCCCGATGTAACCTGAAGGAGAACCTGCTG
AAGGACAATTGTGCTCCAGAGTCTATTGAGTTCCCAGTCAGTGAGGCCCAGATCCTGGAGGCTAGGCCAC
TCAGCAGCAAGGGCTCTGGAAGCAGCGCCCAGATCACTCAAGTCAGCCCTCAGAGGATTGCCCTTCGACT
ACGGCCAGATGATTCGAAGATCTTCTCACTTCAAGTGCGGCAGGTGGAGGATTACCCCGTGGACATCTAC
TACTTGATGGACCTGTCTTTCTCCATGAAGGATGATCTGTCCAGCATCCAGACCCTGGGTACCAAGTTGG
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GCCGTACATGTACATCTCCCCACCACAGGCAATCAAAAACCCCTGTTACAATATGAAGAATGCCTGCTTG
CCCATGTTTGGCTACAAACACGTGCTGACGCTAACCGACCAGGTGTCCCGCTTCAATGAAGAAGTGAAGA
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TGATGAAAAAATTGGCTGGAGGAATGACGCATCCCATTTGCTAGTGTTTACCACGGATGCCAAGACCCAT
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CCTGGGACCACAGTGGGAGTCCTGTCTGATGACTCAAGCAACGTCCTCCAGCTCATTGTTGATGCTTACG
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TGGCTGGGGTCCATGTGTGAGTGCTCTGAGGAGGATTACCGACCCTCTCAGCAGGAAGAGTGCAGCCCCA
AGGAGGGCCAGCCCATCTGCAGCCAGCGGGGAGAGTGCCTCTGTGGCCAGTGTGTCTGCCATAGCAGCGA
CTTCGGCAAGATCACTGGCAAGTACTGTGAGTGCGATGACTTCTCCTGCGTCCGCTACAAAGGGGAGATG
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TGACCGGAAGGAATTTGCTAAATTTGAGGAAGAACGAGCCAGAGCCAAGTGGGACACAGCAAACAACCCG
CTGTATAAAGAGGCCACCTCCACCTTCACCAATATCACCTACCGGGGGACT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR227348 representing NM_016780
Red=Cloning site Green=Tags(s)

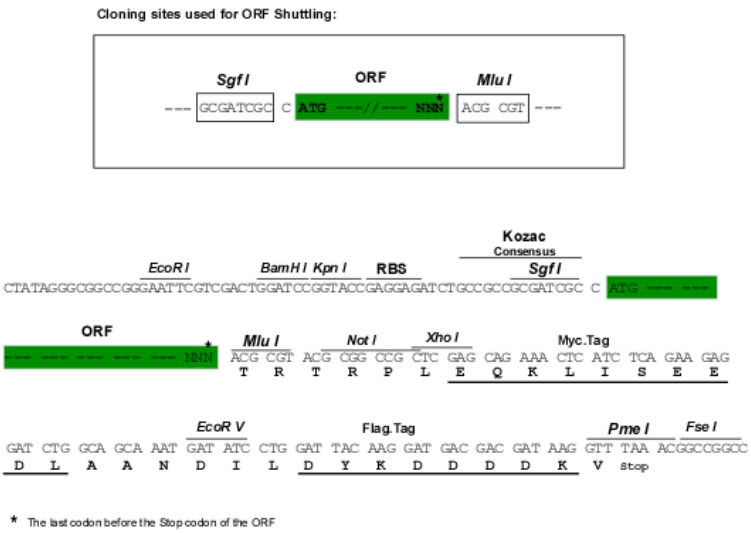
MRAQWPGQLWAALLALGALAGVVVGESNICTTRGVNSCQQCLAVSPVCAWCSDETLSQGSPRCNLKENLL
KDNCAPESIEFPVSEAQILEARPLSSKGSGSSAQITQVSPQRIALRLRPDDSKIFSLQVRQVEDYPVDIY
YLMDLSFSMKDDLSSIQTLGTKLASQMRKLTSNLRIGFGAFVDKPVSPYMYISPPQAIKNPCYNMKNACL
PMFGYKHVLTLTDQVSRFNEEVKKQSVSRNRDAPEGGFDAIMQATVCDEKIGWRNDASHLLVFTTDAKTH
IALDGRLAGIVLPNDGHCHIGTDNHYSASTTMDYPSLGLMTEKLSQKNINLIFAVTENVVSLYQNYSELI
PGTTVGVLSDDSSNVLQLIVDAYGKIRSKVELEVRDLPEELSLSFNATCLNNEVIPGLKSCVGLKIGDTV
SFSIEAKVRGCPQEKEQSFTIKPVGFKDSLTVQVTFDCDCACQAFAQPSSPRCNNGNGTFECGVCRCDQG
WLGSMCECSEEDYRPSQQEECSPKEGQPICSQRGECLCGQCVCHSSDFGKITGKYCECDDFSCVRYKGEM
CSGHGQCNCGDCVCDSDWTGYYCNCTTRTDTCMSTNGLLCSGRGNCECGSCVCVQPGSYGDTCEKCPTCP
DACSFKKECVECKKFNRGTLHEENTCSRYCRDDIEQVKELTDTGKNAVNCTYKNEDDCVVRFQYYEDTSG
RAVLYVVEEPECPKGPDILVVLLSVMGAILLIGLATLLIWKLLITIHDRKEFAKFEEERARAKWDTANNP
LYKEATSTFTNITYRGT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9031_c01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_016780

ORF Size: 2361 bp

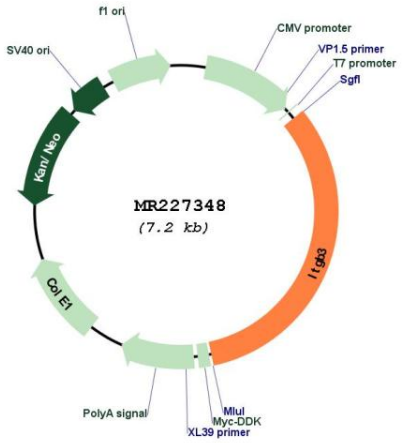
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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

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_016780.2, NP_058060.2
RefSeq Size:	5795 bp
RefSeq ORF:	2364 bp
Locus ID:	16416
UniProt ID:	O54890
Cytogenetics:	11 67.84 cM
MW:	87.2 kDa

Gene Summary: Integrin alpha-V/beta-3 (ITGAV:ITGB3) is a receptor for cytotactin, fibronectin, laminin, matrix metalloproteinase-2, osteopontin, osteomodulin, prothrombin, thrombospondin, vitronectin and von Willebrand factor. Integrin alpha-IIB/beta-3 (ITGA2B:ITGB3) is a receptor for fibronectin, fibrinogen, plasminogen, prothrombin, thrombospondin and vitronectin. Integrins alpha-IIB/beta-3 and alpha-V/beta-3 recognize the sequence R-G-D in a wide array of ligands. Integrin alpha-IIB/beta-3 recognizes the sequence H-H-L-G-G-G-A-K-Q-A-G-D-V in fibrinogen gamma chain. Following activation integrin alpha-IIB/beta-3 brings about platelet/platelet interaction through binding of soluble fibrinogen. This step leads to rapid platelet aggregation which physically plugs ruptured endothelial surfaces. Fibrinogen binding enhances SELP expression in activated platelets (PubMed:19332769). ITGAV:ITGB3 binds to fractalkine (CX3CL1) and acts as its coreceptor in CX3CR1-dependent fractalkine signaling. ITGAV:ITGB3 binds to NRG1 (via EGF domain) and this binding is essential for NRG1-ERBB signaling. ITGAV:ITGB3 binds to FGF1 and this binding is essential for FGF1 signaling. ITGAV:ITGB3 binds to FGF2 and this binding is essential for FGF2 signaling (By similarity). ITGAV:ITGB3 binds to IGF1 and this binding is essential for IGF1 signaling (By similarity). ITGAV:ITGB3 binds to IGF2 and this binding is essential for IGF2 signaling (By similarity). ITGAV:ITGB3 binds to IL1B and this binding is essential for IL1B signaling (By similarity). ITGAV:ITGB3 binds 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). ITGAV:ITGB3 acts as a receptor for fibrillin-1 (FBN1) and mediates R-G-D-dependent cell adhesion to FBN1 (By similarity). In brain, plays a role in synaptic transmission and plasticity (PubMed:29038237, PubMed:18549786). Involved in the regulation of the serotonin neurotransmission, is required to localize to specific compartments within the synapse the serotonin receptor SLC6A4 and for an appropriate reuptake of serotonin (PubMed:29038237). Controls excitatory synaptic strength by regulating GRIA2-containing AMPAR endocytosis, which affects AMPAR abundance and composition (PubMed:18549786).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR227348