

Product datasheet for **RG212617**

CD49b (ITGA2) (NM_002203) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD49b (ITGA2) (NM_002203) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CD49b
Synonyms:	BR; CD49B; GPIa; HPA-5; VLA-2; VLAA2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG212617 representing NM_002203 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGCCAGAACGGACAGGGGCCGCGCCGCTGCCGCTGCTGCTGGTGTAGCGCTCAGTCAAGGCATTT
TAAATTGTTGTTGGCCTACAATGTTGGTCTCCAGAAAGCAAAAATTTTCCGGTCTTCAAGTGAACA
GTTTGGGTATGCAGTGCAGCAGTTATAAATCCAAAAGGCAACTGGTTACTGGTTGGTCCACCTGGAGT
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AACTAAATTTGCAAACCTCAACAAGCATTCCAATGTTACTGAGATGAAAACCAACATGAGCCTCGGCTT
GATCCTACCAGGAACATGGGAACTGGAGTTTTCTCACATGTGGTCTCTGTGGGCACAGCAATGTGGG
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TTGGGATGCAGTAAAGAAATTTTTGGAAAAATTTGTACAAGGCCTTGATATAGGCCCCACAAGACACAG
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AAATGATTGTAGCAACATCCCAGACATCCAATATGGTGGGACCTCACAAACACATTCGGAGCAATTCA
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AGAAAATAAAGCGATCGCTAGTATTCCAACAGAAAGATACTTTTTCAATGTGTCTGATGAAGCAGCTCTA
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TTTGGTAGTGTGCTGTGTTCAAGTGTGATGTGGATAAAGACACCATTACAGACGTGCTCTTGGTAGGTGCAC
CAATGTACATGAGTGACCTAAAGAAAGAGGAAGGAAGAGTCTACCTGTTACTATCAAAAAGGGCATT
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TTTTGCTGTTAGCTCTGGTTGCAATTTATGGAAGCTCGGCTTCTTCAAAGAAAATATGAAAAGATGAC
CAAAAATCCAGATGAGATTGATGAGACCACAGAGCTCAGTAGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG212617 representing NM_002203
 Red=Cloning site Green=Tags(s)

MGPERTGAAPLPLLLVLALSQGILNCCLAYNVGLPEAKIFSGPSSEQFGYAVQQFINPKGNWLLVGPSPW
 GFPENRMGDVYKCPVDLSTATCEKLNLTSTIPNVTEMKTNMSLGLILTRNMGTTGGFLTCGPLWAQCG
 NQYTTTGVCSDISPDFQLSASFSPATQPCPSLIDVVVVCDESNSIYPWDAVKNFLEKFVQGLDIGPTKTQ
 VGLIQYANNPRVFNLTNYKTKKEEMIVATSQTSQYGGDLTNTFGAIQYARKYAYSAAASGGRRSATKVMV
 VTDGESHGSMMLKAVIDQCNDHNLRFGI AVLGYLNRNALDTKNLIKEIKAIASIPTERYFFNVSDEAAL
 LEKAGTLGEQIFSIIEGTVQGGDNFQMEMSQVGFSA DYSSQNDILMLGAVGAFGWSGTIVQKTSHGHLIFP
 KQAFDQILQDRNHSSYLGYSVAAISTGESTHFVAGAPRANYTGQIVLYSVNENGNITVIQAHRGDQIGSY
 FGSVLCSDVDVKDITDVLVVGAPMYSDLKKEEGRVYLFITKKGILGQHGFLEGPGEIENTRFGSAIAA
 LSDINMDGFNDVIVGSPLENQNSGAVYIYNGHQGTIRTKYSQKILGSDGAFRSHLQYFGRSLDGYGDLNG
 DSITDVSIGAFGQVVQLWSQSIADVAIEASF TPEKITLVNKNAQIILKLCFSAKFRPTKQNNQVAIVYNI
 TLDADGFSRVTSRGLFKENNERCLQKNMVNQAQSCPEHIIYIQEPSD VVNSLDLRVDISLENPGTSPA
 LEAYSETAKVFSIPFHKDCGEDGLCISDLVLDVRQIPAAQE QPFI VSNQNKRLTF SVTLKNKRESAYNTG
 I VVDFSENLFASFSLPVDGTEVTCQVAASQKSVACDVGYPALKREQQVFTFINDFNLQNLQNAASLSF
 QALSESQEENKADNLVNLKIPLLYDAE IHLTRSTNINFYEISSDGNVPSIVHSFEDVGPKFIFSLKVTTG
 SVPVSMATVIIHIPQYTKENPLMYLTGVQTDKAGDISCNADINPLKIGQTSSSVSKFENFRHTKELNC
 RTASCNNVTCWLKDVHMKGEYFVNVVTRIWNGTFASSTFQTVQLTAAAEINTYNPEIYVIEDNTVTIPLM
 IMPKDEKAEVPTGVIIGSIIAGILLLLALVAILWKLGF FKRKYEKMTKNPDEIDETTELSS

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI
Cloning Scheme:



ACCN: NM_002203
ORF Size: 3543 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_002203.2](#), [NP_002194.1](#)

RefSeq Size: 5361 bp

RefSeq ORF: 3546 bp

Locus ID: 3673

UniProt ID: [P17301](#)

Cytogenetics: 5q11.2

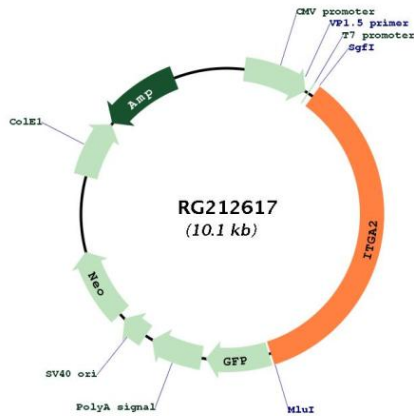
Domains: FG-GAP, VWA

Protein Families: Druggable Genome, Transmembrane

Protein Pathways: Arrhythmogenic right ventricular cardiomyopathy (ARVC), Dilated cardiomyopathy, ECM-receptor interaction, Focal adhesion, Hematopoietic cell lineage, Hypertrophic cardiomyopathy (HCM), Pathways in cancer, Regulation of actin cytoskeleton, Small cell lung cancer

Gene Summary:

This gene encodes the alpha subunit of a transmembrane receptor for collagens and related proteins. The encoded protein forms a heterodimer with a beta subunit and mediates the adhesion of platelets and other cell types to the extracellular matrix. Loss of the encoded protein is associated with bleeding disorder platelet-type 9. Antibodies against this protein are found in several immune disorders, including neonatal alloimmune thrombocytopenia. This gene is located adjacent to a related alpha subunit gene. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2012]

Product images:


Circular map for RG212617