

## Product datasheet for **MG226923**

### **Cd36 (NM\_001159555) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Cd36 (NM_001159555) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cd36
Synonyms:	FAT; GPIV; Scarb3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG226923 representing NM\_001159555  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGGCTGTGATCGGAAGTGTGGGCTCATTGCTGGAGCTGTTATTGGTGCAGTCCTGGCTGTGTTTGGAG  
 GCATTCTCATGCCAGTCGGAGACATGCTTATTGAGAAGACAATCAAAGGGAAGTTGTCCTGAAGAAGG  
 AACCACTGCTTTCAAAAAGTGGGTTAAAACAGGCACCACTGTGTACAGACAGTTTTGGATCTTTGATGTG  
 CAAAACCCAGATGACGTGGCAAAGAAGCAGCAGCAAATCAAGGTTAAACAAAGAGGTCCTTACACATACA  
 GAGTTCGTTATCTAGCCAAGGAAAATAAAGTCAAGGACCCCGAGGACCACACTGTGTCTTTGTACAGCC  
 CAATGGAGCCATCTTTGAGCCTCACTGTCTGTTGGAACAGAGGATGACAACCTTACAGTCTGAATCTG  
 GCTGTAGCAGCTGCACCACATATCTACAAAATTCATTTGTTCAAGTTGTGCTCAACTCTTTATAAAAA  
 AGTCCAAGTCTTCTATGTTCAAACAAGATCTTTGAAAGAAGTCTGTGGGGTTACAAAGATCCATTCT  
 CAGTTTGGTTCCATATCCTATAAGTACCACAGTTGGTGTGTTTTATCCTTACAATGACACTGTAGATGGA  
 GTTTATAAAGTTTTCAATGGAAAGGATAACATAAGCAAAGTTGCCATAATTGAGTCTATAAAGGAAAA  
 GGAATTTGTCCTATTGGCCAAGCTATTGCGACATGATTAAATGGCAGACGACGAGCCTCCTTTCCACCTTT  
 TGTGAAAAGTCTCGGACATTGAGATCTTTTCTCTGACATTTGCGAGTCTATCTACGCTGTGTTCCGGA  
 TCTGAAATCGACCTAAAGGAATCCCGGTGACAGATTTGTTCTTCCAGCCAATGCCTTTGCATCACCCC  
 TCCAGAATCCAGACAACCACTGTTTCTGCACTGAAAAAGTAACTCCAATAACTGTACATCTTATGGTGT  
 GCTAGACATTGGCAAATGCAAAGAAGGAAAGCCTGTGTATTTTCGCTCCACATTTCTACATGCAAGT  
 CCAGATGTTTCCAGAACCTATTGAAGGCTTACATCCAAATGAAGATGAGCATAGGACATACTTAGATGTGG  
 AACCCATAACTGGATTCACCTACAATTTGCAAACGACTGCAGGTCAACATATTGGTCAAGCCAGCTAG  
 AAAAAATAGAAGCATTAAAGAATCTGAAGAGACCTTACATTGTACCTATACTGTGGCTAAATGAGACTGGG  
 ACCATTGGTGATGAAAAAGCAGAAATGTTCAAACACAAGTACTGGGAAAATCAAGCTCCTTGGCATGG  
 TAGAGATGGCCTTACTTGGGATTGGAGTGGTGTGTTTGTGCTTTTATGATTTCAATTGTGCTTGCAA  
 ATCCAAGAATGGAAAA

**ACCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG226923 representing NM\_001159555  
 Red=Cloning site Green=Tags(s)

MGCDRNCGLIAGAVIGAVLAVFGGILMPVGDMLIEKTIKREVVLEEGTTAFKNWVKTGTTVYRQFWIFDV  
 QNPDDVAKNSSKIKVKQRGPYTYRVRYLAKENITQDPEDHTVSFVQPNGAIFEPSLSVGTEDDNFTVLNL  
 AVAAAPHIYQNSFVQVVLNSLIKSKSSMFQTRSLKELLWGYKDPFLSLVPYPISTTVGVFYPYNDTVDG  
 VYKVFNGKDNISKVAIIIESYKGRNLSYWPSYCDMINGTDAASFPPFVEKSRTLRFSSDICRSIYAVFG  
 SEIDLKGI PVYRFVLPANAFASPLQNPNDNHCCTEKVISNNCTSYGVLDIGKCKEKPVIISLPHFLHAS  
 PDVSEPIEGLHPNEDEHRTYLDVEPITGFTLQFAKRLQVNILVKPARKIEALKNLKRPYIIVPILWLNETH  
 TIGDEKAEMFKTQVTGKIKLLGMVEMALLGIGVVMFVAFMISYACKSKNGK

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001159555

**ORF Size:** 1416 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](mailto: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\\_001159555.1](#), [NP\\_001153027.1](#)

RefSeq Size: 3539 bp

RefSeq ORF: 1419 bp

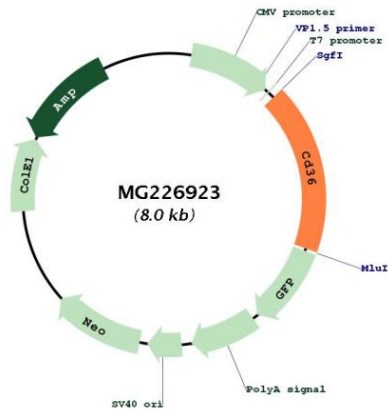
Locus ID: 12491

UniProt ID: [Q08857](#)

Cytogenetics: 5 8.11 cM

**Gene Summary:** Multifunctional glycoprotein that acts as receptor for a broad range of ligands. Ligands can be of proteinaceous nature like thrombospondin, fibronectin, collagen or amyloid-beta as well as of lipidic nature such as oxidized low-density lipoprotein (oxLDL), anionic phospholipids, long-chain fatty acids and bacterial diacylated lipopeptides (PubMed:7685021). They are generally multivalent and can therefore engage multiple receptors simultaneously, the resulting formation of CD36 clusters initiates signal transduction and internalization of receptor-ligand complexes. The dependency on coreceptor signaling is strongly ligand specific. Cellular responses to these ligands are involved in angiogenesis, inflammatory response, fatty acid metabolism, taste and dietary fat processing in the intestine (Probable) (PubMed:19847289, PubMed:20037584, PubMed:23395392). Binds long-chain fatty acids and facilitates their transport into cells, thus participating in muscle lipid utilization, adipose energy storage, and gut fat absorption (By similarity). In the small intestine, plays a role in proximal absorption of dietary fatty acid and cholesterol for optimal chylomicron formation, possibly through the activation of MAPK1/3 (ERK1/2) signaling pathway (By similarity) (PubMed:17507371, PubMed:18753675, PubMed:21610069). Involved in oral fat perception and preferences (PubMed:16276419). Detection into the tongue of long-chain fatty acids leads to a rapid and sustained rise in flux and protein content of pancreatobiliary secretions (By similarity) (PubMed:16276419). In taste receptor cells, mediates the induction of an increase in intracellular calcium levels by long-chain fatty acids, leading to the activation of the gustatory neurons in the nucleus of the solitary tract (PubMed:18162488). Important factor in both ventromedial hypothalamus neuronal sensing of long-chain fatty acid and the regulation of energy and glucose homeostasis (By similarity) (PubMed:23557700). Receptor for thrombospondins, THBS1 and THBS2, mediating their antiangiogenic effects (PubMed:15748999). As a coreceptor for TLR4:TLR6 heterodimer, promotes inflammation in monocytes/macrophages. Upon ligand binding, such as oxLDL or amyloid-beta 42, interacts with the heterodimer TLR4:TLR6, the complex is internalized and triggers inflammatory response, leading to NF-kappa-B-dependent production of CXCL1, CXCL2 and CCL9 cytokines, via MYD88 signaling pathway, and CCL5 cytokine, via TICAM1 signaling pathway, as well as IL1B secretion, through the priming and activation of the NLRP3 inflammasome (PubMed:20037584, PubMed:23812099). Selective and nonredundant sensor of microbial diacylated lipopeptide that signal via TLR2:TLR6 heterodimer, this cluster triggers signaling from the cell surface, leading to the NF-kappa-B-dependent production of TNF, via MYD88 signaling pathway and subsequently is targeted to the Golgi in a lipid-raft dependent pathway (By similarity) (PubMed:15690042, PubMed:19847289).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG226923