

Product datasheet for **MG205357**

Cd5l (NM_009690) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Cd5l (NM_009690) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Cd5l
Synonyms: 1/6; AAC-11; AI047839; Api6; CT2; mAIM; Pdp; Sp-alpha
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG205357 representing NM_009690
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCTCCATTGTTCAACTTGATGCTGGCCATCTTGAGCATTTTTGTTGGATCGTGTTCAGAGTCTC
 CAACCAAAGTGCAGCTAGTGGGAGGTGCCACCGCTGTGAAGGGCGAGTGGAGGTGGAACACAATGGCCA
 GTGGGGGACTGTGTGATGATGGCTGGGACCGCGTGATGTGGCTGGTGTGCCGAGAGCTCAATTGT
 GGAGCAGTCATCAAACCCGCGTGGCGCATCATACAGCCACCAGCATCAGAGCAAAGAGTTCTTATTC
 AAGGGTTGACTGCAACGGAACGGAAGACAGTGGCTCAATGTGAGCTAAATTACGATGTTTTGACTG
 CTCACATGAAGAAGATGCTGGGGCACAGTGTGAGAACCCAGACAGTGACCTCCTCTTCATCCAGAGGAT
 GTGCGTCTAGTAGATGGCCCGGGCACTGCCAGGGTCGAGTGGAGGTGCTCCACCAGTCCCAGTGGAGCA
 CTGTGTGTAAGCAGGCTGGAACCTACAGGTCTCAAAGGTGGTGTGCAGGCAGCTCGGGTGTGGCGGGC
 ATTACTGACCTACGGAAGCTGCAACAAGAGTACTCAGGGCAAAGGACCCATCTGGATGGGCAAGATGTCG
 TGTTCTGGACAAGAAGCAAACCTTCGGTCTTGCCTTTGAGTCGTTTGGAGAACAAGTGTACCCATGGCG
 AGGACACATGGATGGAATGTGAAGATCCTTTGAGCTGAAGCTGGTGGGAGGAGACCCCTGCTCTGG
 GAGGTTGGAGGTGCTGCACAAGGTTCTGGGGCTCCGCTGTGATGACAAGTGGGAGAAAAGGAGGAC
 CAAGTGGTCTGCAAGCAACTGGTTGTGGGAAGTCCCTCCATCCACCCAAACCCGGAAAATCTATG
 GGCTGGGGCAGGCCGATCTGGCTGGATGACGTCAACTGCTCAGGGAAGGAACAGTCTCTGGAGTTCTG
 CCGGCACAGGTTGTGGGGTACCACGACTGTACCACAAGGAAGATGTGGAGGTGATCTGCACAGACTTT
 GATGTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG205357 representing NM_009690
 Red=Cloning site Green=Tags(s)

MAPLFNLMLAILSIFVGSCEFSEPTKVQLVGGahrCEGRVEVEHNGQWGTVCDDGWDRRDVAVVCRELNC
 GAVIQTPRGASYQPPASEQRVLIQGVDCNGTEDTLAQCELNYDVFDCSHEEDAGAQCENPDSDLLFIPED
 VRLVDGPGHCQGRVEVLHQSQWSTVCKAGWNLQVSKVVCRLGCGRALLTYGSCNKSTQKGPiWGMKMS
 CSGQEANLRSCLLSRLENNCTHGEDTWMECEDPFELKL VGGDTPCSGRLEVLHKGSWGSVCDNNGEKED
 QVVCKQLGCGKSLHPSPKTRKIYGPAGRIWLDDVNCSGKEQSLEFCRHRLWGYHDCTHKEDVEVICTDF
 DV

TRTRPLE - GFP Tag - V

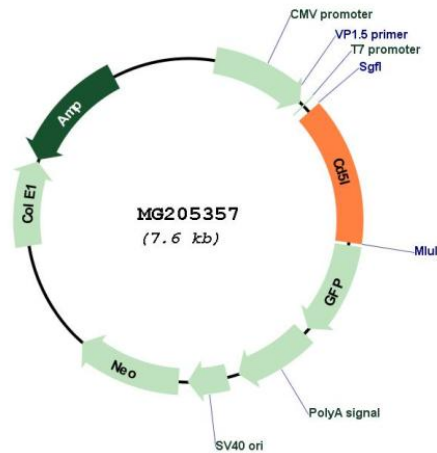
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

NM_009690

ORF Size:	1056 bp
OTI Disclaimer:	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:	<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:	NM_009690.1 , NP_033820.1
RefSeq Size:	1947 bp
RefSeq ORF:	1059 bp
Locus ID:	11801
UniProt ID:	Q9QWK4
Cytogenetics:	3 F1

Gene Summary:

Secreted protein that acts as a key regulator of lipid synthesis: mainly expressed by macrophages in lymphoid and inflamed tissues and regulates mechanisms in inflammatory responses, such as infection or atherosclerosis (PubMed:26048980). Able to inhibit lipid droplet size in adipocytes (PubMed:20519120, PubMed:22579686). Following incorporation into mature adipocytes via CD36-mediated endocytosis, associates with cytosolic FASN, inhibiting fatty acid synthase activity and leading to lipolysis, the degradation of triacylglycerols into glycerol and free fatty acids (FFA) (PubMed:20519120). CD5L-induced lipolysis occurs with progression of obesity: participates in obesity-associated inflammation following recruitment of inflammatory macrophages into adipose tissues, a cause of insulin resistance and obesity-related metabolic disease (PubMed:21730133). Regulation of intracellular lipids mediated by CD5L has a direct effect on transcription regulation mediated by nuclear receptors ROR-gamma (RORC) (PubMed:22579686, PubMed:26607793). Acts as a key regulator of metabolic switch in T-helper Th17 cells (PubMed:26607794, PubMed:26607793). Regulates the expression of pro-inflammatory genes in Th17 cells by altering the lipid content and limiting synthesis of cholesterol ligand of RORC, the master transcription factor of Th17-cell differentiation (PubMed:26607793). CD5L is mainly present in non-pathogenic Th17 cells, where it decreases the content of polyunsaturated fatty acyls (PUFA), affecting two metabolic proteins MSMO1 and CYP51A1, which synthesize ligands of RORC, limiting RORC activity and expression of pro-inflammatory genes (PubMed:26607793). Participates in obesity-associated autoimmunity via its association with IgM, interfering with the binding of IgM to Fc α / μ receptor and enhancing the development of long-lived plasma cells that produce high-affinity IgG autoantibodies (PubMed:23562157). Also acts as an inhibitor of apoptosis in macrophages: promotes macrophage survival from the apoptotic effects of oxidized lipids in case of atherosclerosis (PubMed:9892623, PubMed:16054063). Involved in early response to microbial infection against various pathogens by acting as a pattern recognition receptor and by promoting autophagy (By similarity).[UniProtKB/Swiss-Prot Function]