

## Product datasheet for MR205357

### Cd5l (NM\_009690) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cd5l (NM_009690) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cd5l
Synonyms:	1/6; AAC-11; AI047839; Api6; CT2; mAIM; Pdp; Sp-alpha
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR205357 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTCCATTGTTCAACTTGATGCTGGCCATCTTGAGCATTTTTGTTGGATCGTGTTCAGAGTCTC  
CAACCAAAGTGCAGCTAGTGGGAGGTGCCACCGCTGTGAAGGGCGAGTGGAGGTGGAACACAATGGCCA  
GTGGGGGACTGTGTGATGATGGCTGGGACCGCGTGATGTGGCTGGTGTGCCGAGAGCTCAATTGT  
GGAGCAGTCATCAAACCCCGCTGGCGCATCATACAGCCACCAGCATCAGAGCAAAGAGTTCTTATTC  
AAGGGTTGACTGCAACGGAACGGAAGACACGTTGGCTCAATGTGAGCTAAATTACGATGTTTTGACTG  
CTCACATGAAGAAGATGCTGGGGCACAGTGTGAGAACCCAGACAGTGACCTCCTCTTCATCCAGAGGAT  
GTGCGTCTAGTAGATGGCCCGGGCACTGCCAGGGTCGAGTGGAGGTGCTCCACCAGTCCCAGTGGAGCA  
CTGTGTGTAAGCAGGCTGGAACCTACAGGTCTCAAAGGTGGTGTGCAGGCAGCTCGGGTGTGGCGGGC  
ATTACTGACCTACGGAAGCTGCAACAAGAGTACTCAGGGCAAAGGACCCATCTGGATGGCAAGATGTGC  
TGTTCTGGACAAGAAGCAAACCTTCGGTCTTGCCTTTGAGTCGTTTGGAGAACAAGTACCCATGGCG  
AGGACACATGGATGGAATGTGAAGATCCTTTGAGCTGAAGCTGGTGGGAGGAGACCCCTGCTCTGG  
GAGGTTGGAGGTGCTGCACAAGGTTCTGGGGCTCCGCTGTGATGACAAGTGGGAGAAAAGGAGGAC  
CAAGTGGTCTGCAAGCAACTGGTTGTGGGAAGTCCCTCCATCCCAAAACCCGGAAAATCTATG  
GGCTGGGGCAGGCCGCATCTGGCTGGATGACGTCAACTGCTCAGGGAAGGAACAGTCTCTGGAGTTCTG  
CCGGCACAGGTTGTGGGGTACCACGACTGTACCACAAGGAAGATGTGGAGGTGATCTGCACAGACTTT  
GATGTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR205357 protein sequence  
Red=Cloning site Green=Tags(s)

MAPLFNLMLAILSI FVGS CFSESP TKVQLVGG AHRCEGRVEVEHNGQWGTVCDDGWDRRDVAVVCRELNC  
 GAVIQTPRGASYQPPASEQRVLIQGVDCNGTEDTLAQCELNYDVFDCSHEEDAGAQCENPDSLLFIPED  
 VRLVDGPGHCQGRVEVLHQSQWSTVCKAGWNLQVSKVVCRLGCGRALLTYGSCNKSTQKGPIWMGKMS  
 CSGQEANLRSCLLSRLENNCTHGEDTWMECEDPFELKLVGGDTPCSGRLEVLHKGSWGSVCCDDNWGEKED  
 QVVCKQLGCGKSLHPSPKTRKIYGPAGRIWLDDVNCSGKEQSLEFCRHRLLWGYHDCTHKEDVEVICTDF  
 DV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_009690

**ORF Size:** 1059 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:**

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](#), [NM\\_009690.2](#), [NP\\_033820.1](#)

**RefSeq Size:** 2037 bp

**RefSeq ORF:** 1059 bp

**Locus ID:** 11801

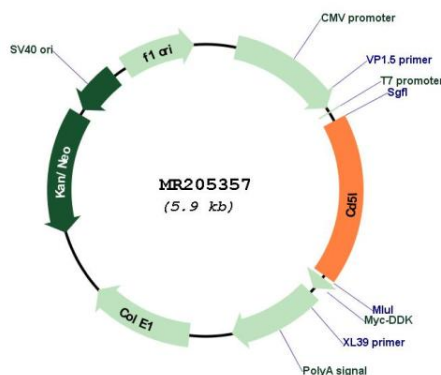
**UniProt ID:** [Q9QWK4](#)

**Cytogenetics:** 3 F1

**MW:** 38.8 kDa

**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 $\alpha$ / $\mu$  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]

**Product images:**

Circular map for MR205357