

Recombinant Mouse Cd5l Protein, His-tagged

Cat. No. Cd5l-7164M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Cd5l protein with a His tag was expressed in insect cells.
Species	Mouse
Source	Insect Cells
ProteinLength	22-352
Description	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. Able to inhibit lipid droplet size in adipocytes. 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). 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. Regulation of intracellular lipids mediated by CD5L has a direct effect on transcription regulation mediated by nuclear receptors ROR-gamma (RORC). Acts as a key regulator of metabolic switch in T-helper Th17 cells. 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. CD5L is mainly present in non-pathogenic Th17 cells, where it decreases the content of polyunsaturated fatty acyls (PUFA), affecting two

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metabolic proteins MSMO1 and CYP51A1, which synthesize ligands of RORC, limiting RORC activity and expression of pro-inflammatory genes. Participates in obesity-associated autoimmunity via its association with IgM, interfering with the binding of IgM to Fcα/μ receptor and enhancing the development of long-lived plasma cells that produce high-affinity IgG autoantibodies. Also acts as an inhibitor of apoptosis in macrophages: promotes macrophage survival from the apoptotic effects of oxidized lipids in case of atherosclerosis. Involved in early response to microbial infection against various pathogens by acting as a pattern recognition receptor and by promoting autophagy.

Form	Liquid
Molecular Mass	37.6 kDa
AA Sequence	ESPTKVQLVGGAHRCEGRVEVEHNGQWGTVCDDGWDRRDVAVVCRELNCGAVIQ TPRGASYQPPASEQRVLIQGVDCNGTEDTLAQCELNYDVFDCSHEEDAGAQCENP DSDLLFIPEDVRLVDGPGHCQGRVEVLHQSQWSTVCKAGWNLQVSKVVCRLGCG GRALLTYGSCNKSTQGKGPIWMGKMSCSGQEANLRSCLLSRLENNCTHGEDTWM ECEDPFELKLVGGDTPCSGRLEVLHKGWSVCCDNWGEKEDQVVCKQLGCGKS LHPSPKTRKIYGPAGRIWLDDVNCSGKEQSLEFCRHRLWGYHDCTHKEDVEVICT DFDVLEHHHHHH
Endotoxin	< 1.0 EU/μg of protein (determined by LAL method)
Purity	> 95 % by SDS-PAGE
Stability	Shelf life: one year from despatch.
Storage	Store undiluted at 2-8 centigrade for one week or (in aliquots) at -20 to -80 centigrade for longer. Avoid repeated freezing and thawing.

Concentration	0.25 mg/mL (determined by absorbance at 280nm)
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Storage Buffer	Phosphate Buffered Saline (pH 7.4) containing 10 % glycerol.
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GENE INFORMATION

Gene Name	Cd5l CD5 antigen-like [Mus musculus (house mouse)]
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Official Symbol	Cd5l
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Synonyms	Cd5l; CD5 antigen-like; A; Sp; 1/6; AIM; CT2; Pdp; AAC-; Api6; mAIM; AAC-11; AI047839; Sp-alpha; CD5 antigen-like; AIM/Spalpha; CT-2; Pdp 1/6; apoptosis inhibitor 6; apoptosis inhibitor expressed by macrophages
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Gene ID	11801
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mRNA Refseq	NM_009690
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Protein Refseq	NP_033820
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UniProt ID	Q9QWK4
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