

## Product datasheet for **TP306528M**

### AIM (CD5L) (NM\_005894) Human Recombinant Protein

#### Product data:

**Product Type:** Recombinant Proteins

**Description:** Recombinant protein of human CD5 molecule-like (CD5L), 100 µg

**Species:** Human

**Expression Host:** HEK293T

**Expression cDNA** >RC206528 protein sequence

**Clone or AA** **Red**=Cloning site **Green**=Tags(s)

**Sequence:**

MALLFSLILAICTRPGFLASPSGVRLVGGGLHRCEGRVEVEQKGGQWGTVCDDGWDIKDVAVLCRELGCAGAA  
SGTPSGILYEPPAEKEQKVLIQSVSCTGTEDTLAQCEQEEVYDCSHDEDAGASCENPESSFSPVPEGVRL  
ADGPGHCKGRVEVKHQNQWYTVCTGWSLRAAKVVCRLGCGRAVLTQKRCNKHAYGRKPIWLSQMSCSG  
REATLQDCPSGPWGKNTCNHDEDTWECEDPFDLRLVGGDNLCGRLEVLHKGWVGSVCDDNWXGKEDQV  
VCKQLGCGKSLSPFRDRKCYGPGVGRWLDNVRCSGEEQSLEQCQHRFWGFHDCTHQEDVAVICSG

**SGP**TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Tag:** C-Myc/DDK

**Predicted MW:** 37.9 kDa

**Concentration:** >0.05 µg/µL as determined by microplate BCA method

**Purity:** > 80% as determined by SDS-PAGE and Coomassie blue staining

**Buffer:** 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol

**Preparation:** Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.

**Note:** For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.

**Storage:** Store at -80°C.

**Stability:** Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

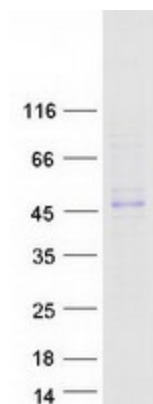
**RefSeq:** [NP\\_005885](#)

**Locus ID:** 922



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UniProt ID:	<a href="#">O43866</a>
RefSeq Size:	2248
Cytogenetics:	1q23.1
RefSeq ORF:	1041
Synonyms:	AIM; API6; CT-2; hAIM; PRO229; SP-ALPHA; Spalpha
Summary:	<p>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 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 Fc<math>\alpha</math>/mu receptor and enhancing the development of long-lived plasma cells that produce high-affinity IgG autoantibodies (By similarity). Also acts as an inhibitor of apoptosis in macrophages: promotes macrophage survival from the apoptotic effects of oxidized lipids in case of atherosclerosis (PubMed:24295828). Involved in early response to microbial infection against various pathogens by acting as a pattern recognition receptor and by promoting autophagy (PubMed:16030018, PubMed:24223991, PubMed:24583716, PubMed:25713983).[UniProtKB/Swiss-Prot Function]</p>
Protein Families:	Druggable Genome, Secreted Protein

**Product images:**

Coomassie blue staining of purified CD5L protein (Cat# [TP306528]). The protein was produced from HEK293T cells transfected with CD5L cDNA clone (Cat# [RC206528]) using MegaTran 2.0 (Cat# [TT210002]).