

Product datasheet for **AR51961PU-S**

CD5L / API6 (22-352, His-tag) Mouse Protein

Product data:

Product Type:	Recombinant Proteins
Description:	CD5L / API6 (22-352, His-tag) mouse protein, 50 µg
Species:	Mouse
Expression Host:	Insect
Expression cDNA Clone or AA Sequence:	ESPTKVQLVG GAHRCEGRVE VEHNGQWGTV CDDGWDRRDV AVVCRELNCG AVIQTTPRGAS YQPPASEQRV LIQGVDCNGT EDTLAQCELN YDVFDCSHEE DAGAQCPD SLLFIPELV RLVDGPGHCQ GRVEVLHQSQ WSTVCKAGWN LQVSKVCRQ LGCGRALLTY GSCNKSTQGK GPIWMGKMSC SGQEANLRSC LLSRLENNCT HGEDTWMECE DPFELKLVGG DTPCSGRLEV LHKGSWGSVC DDNWGEKEDQ VVCKQLGCGK SLHPSPKTRK IYGPAGRIW LDDVNCSGKE QSLEFCRHL WGYHDCTHKE DVEICTDFD VLEHHHHHH
Tag:	His-tag
Predicted MW:	37.6 kDa
Concentration:	lot specific
Purity:	>95% by SDS - PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: Phosphate Buffered Saline (pH 7.4) containing 10% glycerol.
Endotoxin:	< 1.0 EU per 1 microgram of protein (determined by LAL method)
Preparation:	Liquid purified protein
Storage:	Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	NP_033820
Locus ID:	11801
UniProt ID:	Q9QWK4
Cytogenetics:	3 F1
Synonyms:	AIM, CD5 antigen-like, SP-alpha, CT-2, IgM-associated peptide


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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 /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:
