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Product datasheet for SC116428

AIM (CD5L) (NM_005894) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AIM (CD5L) (NM_005894) Human Untagged Clone
Tag:	Tag Free
Symbol:	AIM
Synonyms:	AIM; API6; CT-2; hAIM; PRO229; SP-ALPHA; Spalpha
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC116428 sequence for NM_005894 edited (data generated by NextGen Sequencing)

ATGGCTCTGCTATTCTCCTTGATCCTTGCCATTTGCACCAGACCTGGATTCCTAGCGTCT
CCATCTGGAGTGCGGCTGGTGGGGGGCCTCCACCGCTGTGAAGGGCGGGTGGAGGTGGAA
CAGAAAGGCCAGTGGGGCACCGTGTGTGATGACGGCTGGGACATTAAGGACGTGGCTGTG
TTGTGCCGGGAGCTGGGCTGTGGAGCTGCCAGCGGAACCCCTAGTGGTATTTTGTATGAG
CCACCAGCAGAAAAAGAGCAAAAGGTCCTCATCCAATCAGTCAGTTGCACAGGAACAGAA
GATACATTGGCTCAGTGTGAGCAAGAAGAAGTTTATGATTGTTCACATGATGAAGATGCT
GGGGCATCGTGTGAGAACCCAGAGAGCTCTTTCTCCCCAGTCCCAGAGGGTGTCAGGCTG
GCTGACGGCCCTGGGCATTGCAAGGGACGCGTGGAAGTGAAGCACCAGAACCAGTGGTAT
ACCGTGTGCCAGACAGGCTGGAGCCTCCGGGCCGCAAAGGTGGTGTGCCGGCAGCTGGGA
TGTGGGAGGGCTGTACTGACTCAAAAACGCTGCAACAAGCATGCCTATGGCCGAAAACCC
ATCTGGCTGAGCCAGATGTCATGCTCAGGACGAGAAGCAACCCTTCAGGATTGCCCTTCT
GGGCCTTGGGGGAAGAACACCTGCAACCATGATGAAGACACGTGGGTCGAATGTGAAGAT
CCCTTTGACTTGAGACTAGTAGGAGGAGACAACCTCTGCTCTGGGCGACTGGAGGTGCTG
CACAAGGGCGTATGGGGCTCTGTCTGTGATGACAACTGGGGAGAAAAGGAGGACCAGGTG
GTATGCAAGCAACTGGGCTGTGGGAAGTCCCTCTCTCCCTCCTTCAGAGACCGGAAATGC
TATGGCCCTGGGGTTGGCCGCATCTGGCTGGATAATGTTCGTTGCTCAGGGGAGGAGCAG
TCCCTGGAGCAGTGCCAGCACAGATTTTGGGGGTTTCACGACTGCACCCACCAGGAAGAT
GTGGCTGTCATCTGCTCAGGATAG

Clone variation with respect to NM_005894.2

View online »

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_005894 unedited
CCCCCGCCCCGTTGCCGCAAAGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAG
AGCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGCGAAT
TCGGCACGAGACTTGCAGCTAAAACTAAATATTGCTGCTTGGGGACCTCCTTCTAGCCTT
AAATTTCAGCTCATCACCTTCACCTGCCTTGGTCATGGCTCTGCTATTCTCCTTGATCCT
TGCCATTTGCACCAGACCTGGATTCCTAGCGTCTCCATCTGGAGTGCGGCTGGTGGGGGG
CCTCCACCGCTGTGAAGGGCGGGTGGAGGTGGAACAGAAAGGCCAGTGGGGCACCGTGTG
TGATGACGGCTGGGACATTAAGGACGTGGCTGTGTTGTGCCGGGAGCTGGGCTGTGGAGC
TGCCAGCGGAACCCCTAGTGGTATTTTGTATGAGCCACCAGCAGAAAAAGAGCAAAAGGT
CCTCATCCAATCAGTCAGTTGCACAGGAACAGAAGATACATTGGCTCAGTGTGAGCAAGA
AGAAGTTTATGATTGTTCACATGATGAAGATGCTGGGGCATCGTGTGAGAACCCAGAGAG
CTCTTTCTCCCCAGTCCCAGAGGGTGTCAGGCTGGCTGACGGCCCTGGGCATTGCAAGGG
ACGCGTGGAAGTGAAGCACCAGAACCAGTGGTATACCGTGTGCCAGACAGGCTGGAGCCT
CCGGGCCGCANAGGTGGTGTGCCCGCAGCTGGNNATGTGGAGGGCTGTACTGACTCAAAA
ACGCTGNCACAAGCATGCCTATGGNCCGAAACCCATCTGGCTGAGCCAGATGTCATGCTC
AGGACGAGAAGCAACCCTTCANGGATGCCCTNCTGGGCCCTGGGGAAGNAACACTGCACC
ATGATGAAGACACGTGGGTCGATGTGAAGATCCTTTGACTGNGACTAGTNAGAGGAGACA
ACTCTGCTCTGGCGACC

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_005894 unedited
GAACATGCTTACATAACCCANNNGCTGAAGGGTAAATGTGTTAAAGCTAGCCGTATAATA
AGTACTCATCCTATCCTCAGAATCTAAAGTTGTCAATTTTTACAATCAAGTCTTGATTCT
CTTATTTCTGTCTTGCCTCAAGCTTACAGGCCCCAAAGTCTCAGTTGATAAAGTGAAAAT
GATATTTTTCACTTTCGCTTGGCATAAGACACAACTTTAGCCCTCCCTGATCTCTTTCTG
CCTCTTTCTTGACCTTTTCCCAGTAACCAATATATTTTTCTTTGAATAAAGTAAAATGTA
TTTTTGACATTCCTCTCATTAAATGTCAACCATGTTGGCAGGTTGTATAGGGATGGACAA
CAAAGATTTTTATTGGGGCAATCAGAGGATGAAACATCATTTTTTACACGTCATGAAAAG
GTCTAGGATTATAGGACGCTGCTCTGCTCCTGAAAGAATTGTCTACCTACACTAAGAAAT
AACAGAATAGGGAGGTGTTGCTATTGTGGTCACCTGAAGCTTGAGGAAAAAAAAAAAAAG
TAGTCCAATCAAAAGAATTCTAAACTTTCCCCCAAGTTGCAAGATATTGTCTACCCACCT
TTTCTTTCAAATGTTCCTTTCATTGTTTCATTCCTTTAATGCTTGCAGACCTAGATTAGT
AATACGACCTATATCAGTAATGTTTGCCGACCTAGACCTTAGTAATGGGCTGCACATCTG
ACCCAAGTGACAAGCTTGAGGATTCCAGGCGCCTTGTGGAAAGGCCGGGAAGGCCCGTAC
CAGTGTAAAGGGCAAGGGTGGGCACCGGATACCTGGAAGCTTATCTCCCCCGCAAGAGGG
AACCCACCACTCACTTTACAGGCAGCAAAGGGGGCTGCTGTCCCTTGGAGACAAGCATAA
CCAAGGTTTAAACTCCGGAGGGAG

Restriction Sites: NotI-NotI

ACCN: NM_005894

Insert Size: 2500 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_005894.1, NP_005885.1
RefSeq Size:	2181 bp
RefSeq ORF:	1044 bp
Locus ID:	922
UniProt ID:	O43866
Cytogenetics:	1q23.1
Domains:	SR
Protein Families:	Druggable Genome, Secreted Protein

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. 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 Fcalpha/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]
Transcript Variant: This variant (1) represents the longer transcript and encodes isoform 1, which differs only in the last aa compared to isoform 2.