

## Product datasheet for **RC221499**

### SOAT 2 (SOAT2) (NM\_003578) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SOAT 2 (SOAT2) (NM_003578) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SOAT 2
Synonyms:	ACACT2; ACAT2; ARGP2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC221499 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGAGCCAGGCGGGGCCCTCTGCGTCTGCAGAGGACAGGAGGGCTGGGAGGGGAGCGGGAGCGCCAAC  
 CCTGTGGAGATGGAACACTGAGACGCACAGACCCCGGACTTGGTACAATGACCCGACACATGGAGGC  
 TGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACCTGAGGGAGCTGCTGGATCGGGCCATGCGGGAG  
 GCTATAACAATCCTACCCATCACAAGACAAACCTCTGCCCCACCTCCCCAGGTTCTTGAGCAGGACCC  
 AGGAGCCATCCCTGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGGAGGT  
 GCAGCATTTCCGACCATCTACCACATGTTTCATCGCTGGCCTGTGTCTTCATCATCAGCACCTGGCC  
 ATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGC  
 CATTGGCGCTGGTGACCTGGGTGCCATGTTTCTGTCCACCCTGTTGGCGCGTACCAGGCCCTACGGCT  
 GTGGGCCAGGGCACCTGGACGCAGGCGACGGCCTGGGCTGTGCGCTTTAGCCGCCACGCCGTGGTGT  
 CTCTGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTTGTCTCTGGTCT  
 TCGAGCAGGTTAGGTTCCCTGATGAAAAGCTACTCCTTCCCTGAGAGAGGCTGTGCCTGGGATCCTTCGTGC  
 CAGACGAGGTGAGGGGATCCAGGCCCCAGTTTCTCCAGTACCTCTACTTCTTCTGCCAACACTC  
 ATCTACAGGGAGACTTACCCTAGGACGCCATATGTCAGGTGGAATTATGTGGCCAAGAATTTGCCCAGG  
 CCCTGGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCTCTGTGTTCTGTCTTTGCCAACATGAG  
 CCGAGAGCCCTCAGCACCCGTGCCCTGGTGTCTCTATCCTGCATGCCACGTTGCCAGGCATCTTCATG  
 CTGCTGCTCATCTTCTTGCCTTCTCCATTGCTGGCTCAACGCCCTTTGCCGAGATGCTACGATTTGGAG  
 ACAGGATGTTCTACCGGACTGGTGAACCTCAAGTCTTCTCCAATACTACCGCACTTGAACAGTGGT  
 GGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCGAGGG  
 GTAGCCATGCTGGGTGTGTTCTGGTCTCCGAGTGGCCATGAGTATATCTTCTGCTTCTGCTCTGGGGT  
 TCTTCTATCCCGTCATGCTGATACTTCTTCTTGTGATTGGAGGAATGTTGAACTTCATGATGCATGACCA  
 GCGCACCGGCCCGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGC  
 CTGTAAGTCCAGGAGTGGTACGCACGGCGGCACTGCCCTTACCCAGGCAACTTCTGGGGCTGGTGA  
 CACCTCGATCTTGGTCTGCCATACC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC221499 protein sequence  
 Red=Cloning site Green=Tags(s)

MEPGGARLRLQRTGGLGGERERQPCGDGNTETHRAPDLVQWTRHMEAVKAQLLEQAQQLRELLDRAMRE  
 AIQSYPQDKPLPPPPGSLSRTEPSLQKQVFIIRKSLLELMEVQHFRTIYHMFIAGLCVFIIISTLA  
 IDFIDEGRLLEFDLLIFSFGQLPLALVTWVPMFLSTLLAPYQALRLWARGTWTQATGLGCALLAAHAVV  
 LCALPVHVAVEHQLPPASRCVLVFEQVRFMKSYSFLREAVPGILRARRGEGIQAPSFSSYLFLFCPTL  
 IYRETYPRTPYVRWNYVAKNFAQALGCVLYACFILGRLCVPVFANMSREPFSTRALVLSILHATLPGIFM  
 LLLIFFAFLHCWLNFAEMLRFGDRMFYRDWWNSTSFSNYRTWNVVVDWLYSYVYQDGLRLLGARARG  
 VAMLGVFLVSAVAHEYIFCFVLGFFYPVMLILFLVIGGMLNFMMDHQRTPAWNVLMTMLFLGQGIQVS  
 LYCQEWYARRHCPLPQATFWGLVTPRSWSCHT

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6451\\_b06.zip](https://cdn.origene.com/chromatograms/mk6451_b06.zip)

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_003578

**ORF Size:** 1566 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\\_003578.4](#)

**RefSeq Size:** 2073 bp

**RefSeq ORF:** 1569 bp

**Locus ID:** 8435

**UniProt ID:** [O75908](#)

**Cytogenetics:** 12q13.13

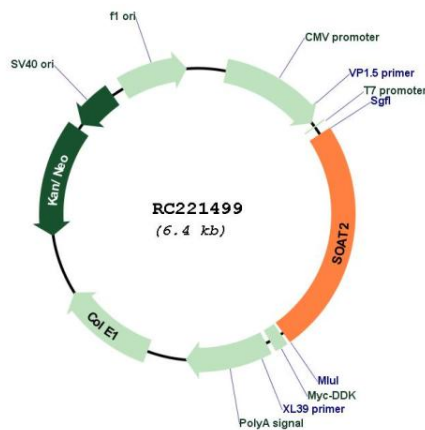
**Protein Families:** Transmembrane

**Protein Pathways:** Steroid biosynthesis

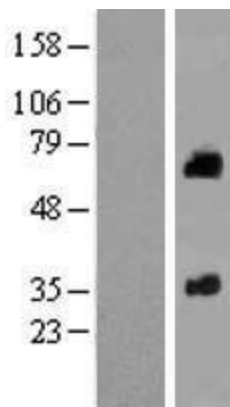
**MW:** 59.8 kDa

**Gene Summary:** Summary: This gene is a member of a small family of acyl coenzyme A:cholesterol acyltransferases. The gene encodes a membrane-bound enzyme localized in the endoplasmic reticulum that produces intracellular cholesterol esters from long-chain fatty acyl CoA and cholesterol. The cholesterol esters are then stored as cytoplasmic lipid droplets inside the cell. The enzyme is implicated in cholesterol absorption in the intestine and in the assembly and secretion of apolipoprotein B-containing lipoproteins such as very low density lipoprotein (VLDL). Several alternatively spliced transcript variants of this gene have been described, but their full-length nature is not known. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RC221499



Western blot validation of overexpression lysate (Cat# [LY418574]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221499 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).