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Product datasheet for RC210445

ACOT12 (NM_130767) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ACOT12 (NM_130767) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ACOT12
Synonyms:	Cach; CACH-1; STARD15; THEAL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC210445 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGCGGCCGGCGCCCGGCGAGGTGGTCATGAGCCAAGCCATCCAGCCGGCGCACGCCACTGCGCGCG
GCGAGCTGAGCGCGGGGCAGCTGCTCAAGTGGATCGACACCACCGCCTGCCTGGCGGCTGAGAAACATGC
TGGAGTTTCCTGCGTTACAGCCTCAGTGGATGACATACAGTTTGAGGAGACAGCTAGAGTTGGACAAGTT
ATAACCATCAAAGCAAAAGTTACTAGAGCATTCAGCACAAGCATGGAGATCAGTATCAAGGTCATGGTAC
AGGATATGCTCACTGGCATTGAGAAGCTTGTTAGTGTGGCTTTCTCCACATTTGTAGCCAAACCAGTTGG
AAAAGAAAAGATTCATTTAAAACCAGTCACACTTCTAACTGAACAAGATCATGTGGAACATAATCTGGCT
GCTGAGAGAAGGAAAGTTCGATTACAACATGAAGATACCTTTAACAATTTAATGAAGGAAAGTAGCAAAT
TTGATGATCTCATTTTTGATGAAGAGGAAGGAGCGGTTTCCACAAGGGGCACCTCCGTTCAGAGCATTGA
ACTGGTCCTCCCACCCCATGCAAACCATCACGGAAATACATTTGGTGGCCAGATTATGGCGTGGATGGAG
ACAGTGGCTACTATTTCTGCAAGCCGCCTGTGTTGGGCTCATCCCTTTCTGAAGTCCGTAGATATGTTTA
AGTTCCGGGGACCATCTACAGTTGGAGATCGTCTTGTCTTCACTGCCATTGTCAACAATACATTTCAGAC
CTGTGTTGAAGTTGGAGTTCGCGTGGAGGCCTTTGACTGTCAGGAATGGGCCGAGGGCCGAGGGCGTCAC
ATCAACAGTGCTTTTCTCATTTACAATGCTGCTGATGATAAGGAAAATCTCATCACGTTTCCCAGAATCC
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AAAATATGTTATTTCCCACAAAGAAGAGGTTCCACTTTGCATACACTGGGATATCAGCAAGCAGGCATCC
CTGAGTGACAGCAATGTGGAGGCCCTCAAAAAACTGGCAGCCAAAAGGGGTTGGGAGGTTACCAGCACTG
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AAGTCCAGCACATTTGGCTTATCGTCTCTTGTCTGACTTTACAAAGCGACCTTTGTGGGACCCCCATTTT
GTGTCCTGTGAAGTCATAGACTGGGTGAGTGAAGATGATCAGCTGTATCACATCACCTGTCCTATACTGA
ATGATGACAAACCCAAAGACTTGGTAGTACTCGTATCACGAAGAAAACCCCTCAAAGATGGTAACACTTA
CACAGTGGCAGTGAAGTCGGTCATTTTGCCATCGGTCCCCCCGTCTCCACAGTACATCAGAAGTGAAATC
ATATGTGCCGGATTTCTCATCCATGCTATTGACAGCAATTCATGCATCGTATCTTACTTTAACCATATGT
CTGCTAGCATCCTTCCTTACTTTGCTGGAAATCTTGGTGGCTGGTCAAAATCCATTGAAGAAACAGCAGC
CTCTTGTATACAGTTCTTAGAGAATCCTCCTGATGATGGGTTTGTAAGCACATTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC210445 protein sequence
Red=Cloning site Green=Tags(s)

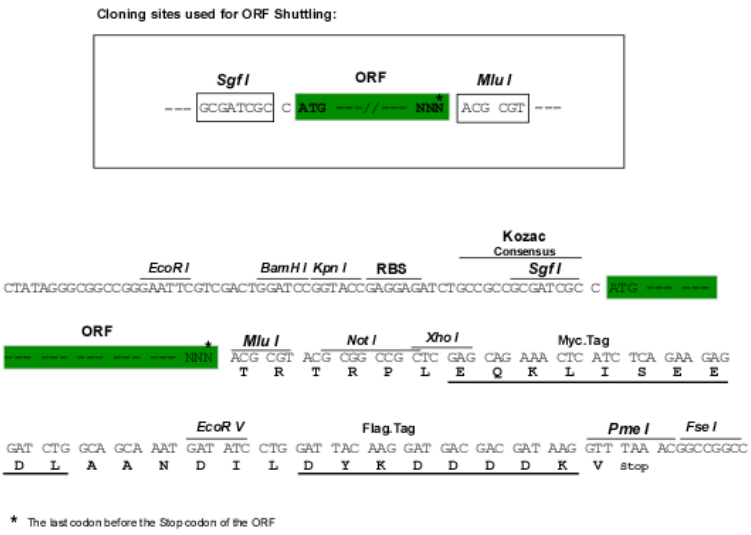
MERPAPGEVVMSQAIQPAHATARGELSAGQLLKWIDTTACLAAEKHAGVSCVTASVDDIQFEETARVGQV
ITIKAKVTRAFSTSMEISIKVMVQDMLTGIEKLVSVAFSTFVAKPVGKEKIHLKPVTLLTEQDHVEHNLA
AERRKVRLQHEDTFNNLMKESSKFDDLIFDEEEGAVSTRGTSVQSIELVLPPHANHHGNTFGGQIMAWME
TVATISASRLCWAHPFLKSVDMFKFRGPSTVGDRLVFTAIVNNTFQTCVEVGVRVEAFDCQEWAEGRGRH
INSAFLIYNAADDKENLITFPRIQPISKDDFRRYRGAIARKRIRLGRKYVISHKEEVPLCIHWDISKQAS
LSDSNVEALKKLAAKRGWEVTSTVEKIKIYTLEEHDVLSVWVEKHVGSPAHLAYRLLSDFTKRPLWDPHF
VSCEVIDWVSEDDQLYHITCPILNDDKPKDLVVLVSRRKPLKDGNTYTVAVKSVILPSVPPSPQYIRSEI
ICAGFLIHAIDSNSCIVSYFNHMSASILPYFAGNLGGWSKSIEETAASCIQFLENPPDDGFVSTF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6374_a02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_130767

ORF Size: 1665 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_130767.3

RefSeq Size: 1989 bp

RefSeq ORF: 1668 bp

Locus ID: 134526

UniProt ID: Q8WYK0

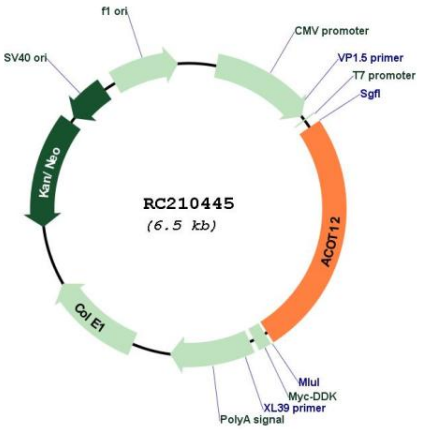
Cytogenetics: 5q14.1

Protein Pathways: Pyruvate metabolism

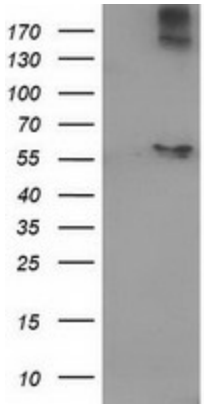
MW: 62 kDa

Gene Summary: Acyl-CoA thioesterases are a group of enzymes that catalyze the hydrolysis of acyl-CoAs to the free fatty acid and coenzyme A (CoASH), providing the potential to regulate intracellular levels of acyl-CoAs, free fatty acids and CoASH (PubMed:16951743). Acyl-coenzyme A thioesterase 12/ACOT12 preferentially hydrolyzes acetyl-CoA (PubMed:16951743).[UniProtKB/Swiss-Prot Function]

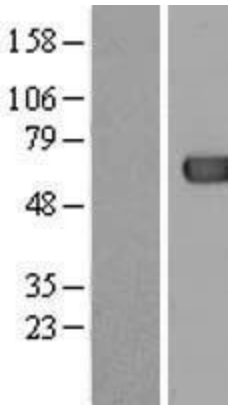
Product images:



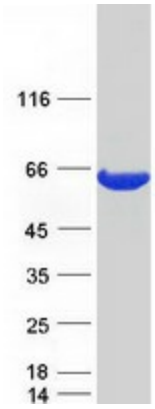
Circular map for RC210445



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ACOT12 (Cat# RC210445, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ACOT12(Cat# [TA502396]). Positive lysates [LY408930] (100ug) and [LC408930] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY408930]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210445 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ACOT12 protein (Cat# [TP310445]). The protein was produced from HEK293T cells transfected with ACOT12 cDNA clone (Cat# RC210445) using MegaTran 2.0 (Cat# [TT210002]).