

Product datasheet for **RC240006**

ATP citrate lyase (ACLY) (NM_001303275) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: ATP citrate lyase (ACLY) (NM_001303275) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: ACLY
Synonyms: ACL; ATPCL; CLATP
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RC240006 representing NM_001303275
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGGGGCGGGAAAAGTCCGGCTGGGCCGGGACAAAAGCCGGATCCCGGAAGCTACCGGCTGCTGGGG
 TGCTCCGGATTTTGC GG GTTCGTGGGCCTGTGGAAGAAGCGCCGCGCACGGACTTCGGCAGAGACAGG
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 GGGCCCGCTTGCTGCAGGACCACCCCTGGCTGCTCAGCCAGAAGTGGTAGTCAAGCCAGACCAGCTGAT
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GGGCCGATGAGGTGGCGCTGCAAAGAAGGCCAAGCCTGCCATGCCACAAGGAAAGAGCACCACCCTCTT
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
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Protein Sequence: >RC240006 representing NM_001303275
 Red=Cloning site Green=Tags(s)

MGAGKSPAGPGQKPDPGKLPAAVLRILRGSSGLWKKRRARTSAETGRAGLSAAMSAKAISEQTGKELLY
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 DEKLNPEIDIKHLLVHAPEDKKEILASFISGLNFYEDLYFTYLEINPLVVTKDGVYVLDLAAKVDATAD
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 GVNELANYGEYS GAPSEQQTYDYAKTILSLMTREKHPDGKILIIIGGSIANFTNVAATFKGIVRAIRDYQG
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 VAYVSRSGMSNELNNIISRTTDGVYEGVAIGDRYPGSTFMDHVLRYQDTPGVKMIIVLGEIGGTEEYK
 ICRGIKEGRLTKPIVCWCIGTCATMFSSEVQFGHAGACANQASETAVAKNQALKEAGVFVPRSFDELGEI
 IQSVYEDLVANGVIVPAQEVPPPTVPMDSWARELGLIRKPASFMTSICDERGQELIYAGMPITEVFKEE
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 GALDAAKMFSAFDSGIIPMEFVNKMKKEGKIMGIGHRVKSINNPDMRVQILKDYVRQHPATPLLDY
 ALEVEKITTSKPNLILNVDGLIGVAFVDMRLNCGSFTREEADEYIDIGALNGIFVLGRSMGFIGHYLDQ
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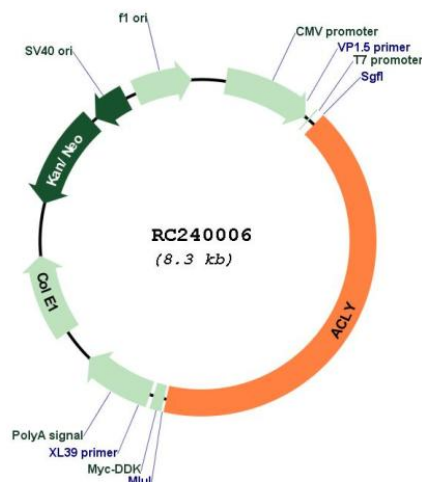
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001303275

ORF Size: 3435 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_001303275.1](#), [NP_001290204.1](#)

RefSeq Size: 4339 bp

RefSeq ORF: 3438 bp

Locus ID: 47

UniProt ID: [P53396](#)

Cytogenetics: 17q21.2

Protein Families:	Druggable Genome
Protein Pathways:	Citrate cycle (TCA cycle), Metabolic pathways
MW:	125.6 kDa
Gene Summary:	<p>ATP citrate lyase is the primary enzyme responsible for the synthesis of cytosolic acetyl-CoA in many tissues. The enzyme is a tetramer (relative molecular weight approximately 440,000) of apparently identical subunits. It catalyzes the formation of acetyl-CoA and oxaloacetate from citrate and CoA with a concomitant hydrolysis of ATP to ADP and phosphate. The product, acetyl-CoA, serves several important biosynthetic pathways, including lipogenesis and cholesterologenesis. In nervous tissue, ATP citrate-lyase may be involved in the biosynthesis of acetylcholine. Multiple transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, Dec 2014]</p>