

Product datasheet for **RC200508**

ATP citrate lyase (ACLY) (NM_001096) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP citrate lyase (ACLY) (NM_001096) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ACLY
Synonyms:	ACL; ATPCL; CLATP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC200508 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCGGCCAAGGCAATTCAGAGCAGACGGGCAAGAAGCTCCTTTACAAGTTCATCTGTACCACCTCAG
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ACCCTCTTCAGCCGCCACACCAAGGCCATTGTGTGGGGCATGCAGACCCGGGCCGTGCAAGGCATGCTGG
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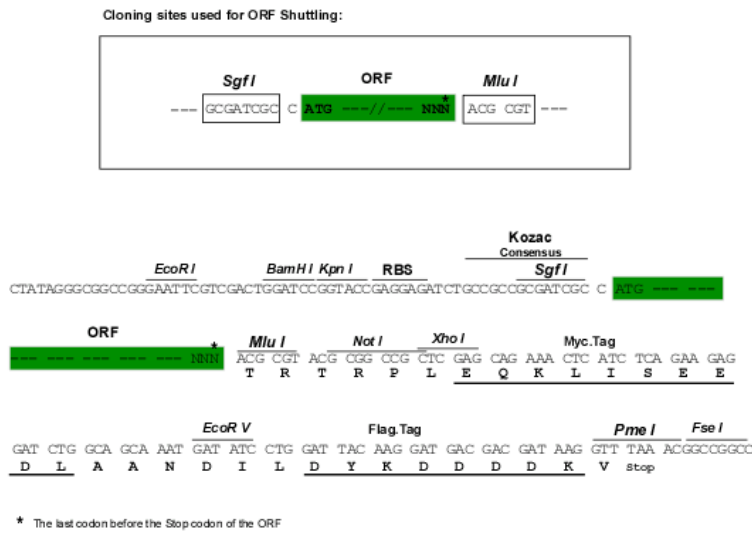
Protein Sequence:

>RC200508 protein sequence
Red=Cloning site Green=Tags(s)

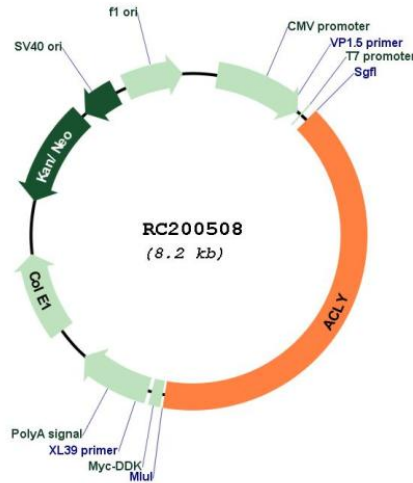
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 IICARAGKDLVSSLTSGLLTIGDRFGGALDAAAKMFSKAFDSGIIIPMEFVNKMKKEGKIMGIGHRVKSI
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6263_a12.zip
Restriction Sites: SgfI-MluI
Cloning Scheme:



Plasmid Map:



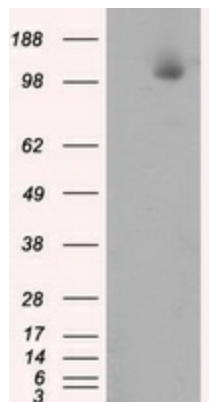
ACCN: NM_001096

ORF Size: 3303 bp

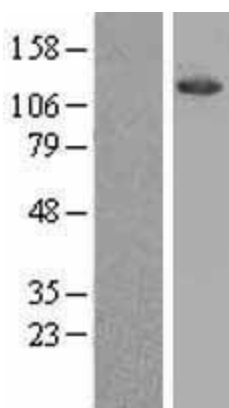
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

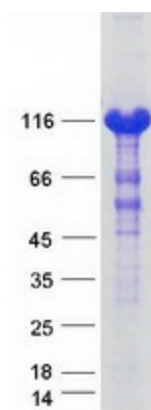
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open 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_001096.3
RefSeq Size:	4450 bp
RefSeq ORF:	3306 bp
Locus ID:	47
UniProt ID:	P53396
Cytogenetics:	17q21.2
Domains:	CoA_binding, ligase-CoA
Protein Families:	Druggable Genome
Protein Pathways:	Citrate cycle (TCA cycle), Metabolic pathways
MW:	120.8 kDa
Gene Summary:	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]

Product images:


HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ACLY (Cat# RC200508, 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-ACLY (Cat# [TA501031]). Positive lysates [LY420122] (100ug) and [LC420122] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY420122]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200508 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ACLY protein (Cat# [TP300508]). The protein was produced from HEK293T cells transfected with ACLY cDNA clone (Cat# RC200508) using MegaTran 2.0 (Cat# [TT210002]).