

Product datasheet for **SC315170**

ATP citrate lyase (ACLY) (NM_198830) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP citrate lyase (ACLY) (NM_198830) Human Untagged Clone
Tag:	Tag Free
Symbol:	ACLY
Synonyms:	ACL; ATPCL; CLATP
Vector:	<u>pCMV6 series</u>
Fully Sequenced ORF:	>NCBI ORF sequence for NM_198830, the custom clone sequence may differ by one or more nucleotides

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ATGTCGGCCAAGGCAATTCAGAGCAGACGGGCAAGAAGCTCCTTTACAAGTTCATCTGT
ACCACCTCAGCCATCCAGAATCGGTTCAAGTATGCTCGGGTCACTCCTGACACAGACTGG
GCCCGTTGCTGCAGGACCACCCTGGCTGCTCAGCCAGAAGCTGGTAGTCAAGCCAGAC
CAGCTGATCAAACGTCGTGGAAAAGCTGGTCTCGTTGGGGTCAACCTCACTCTGGATGGG
GTCAAGTCTGGCTGAAGCCACGGCTGGGACAGGAAGCCACAGTTGGCAAGGCCACAGGC
TTCCTCAAGAAGCTTCTGATCGAGCCCTTCGTCCCCACAGTCAGGCTGAGGAGTTCAT
GTCTGCATCTATGCCACCCGAGAAGGGGACTACGTCCTGTCCACCACGAGGGGGTGTG
GACGTGGGTGATGTGGACGCCAAGGCCAGAGCTGCTTGTGGCGTGGATGAGAAAAGT
AATCCTGAGGACATCAAAAAACCTGTTGGTCCACGCCCTGAAGACAAGAAAGAAATT
CTGGCCAGTTTTATCTCCGGCCTTTCAATTTCTACGAGGACTTGTACTTCACCTACCTC
GAGATCAATCCCCTTGTAGTGACCAAAGATGGAGTCTATGTCCTTGACTTGGCGGCCAAG
GTGGACGCCACTGCCACTACATCTGCAAAGTGAAGTGGGGTGCATCGAGTTCCTCCC
CCCTTCGGGCGGGAGGCATATCCAGAGGAAGCCTACATTGCAGACCTCGATGCCAAAAGT
GGGGCAAGCCTGAAGCTGACCTTGCTGAACCCAAAGGGAGGATCTGGACCATGGTGGCC
GGGGTGGCGCCTCTGTCTGTACAGCGATACCATCTGTGATCTAGGGGGTGTCAACGAG
CTGGCAAAGTATGGGGAGTACTCAGGCGCCCCAGCGAGCAGACCTATGACTATGCC
AAGACTATCCTCTCCCTCATGACCCGAGAGAAGCACCCAGATGGCAAGATCCTCATCATT
GGAGGCAGCATCGCAAAGTTCACCAACGTGGCTGCCACGTTCAAGGGCATCGTGAGAGCA
ATTCGAGATTACCAGGGCCCCCTGAAGGAGCACGAAGTCAACAATCTTTGTCCGAAGAGGT
GGCCCCAAGTATCAGGAGGGCTTACGGGTGATGGGAGAAGTGGGAAGACCACTGGGATC
CCCATCCATGTCTTTGGCACAGAGACTCACATGACGGCCATTGTGGGCATGGCCCTGGG
CACCAGCCATCCCCAACAGCCACCCACAGCGGCCACACTGCAAAGTTCCTCCTCAAC
GCCAGCGGGAGCACATCGACGCCAGCCCCAGCAGGACAGCATCTTTTTCTGAGTCCAGG
GCCGATGAGGTGGCGCCTGCAAAGAAGGCCAAGCCTGCCATGCCACAAGGAAAGAGCACC
ACCCTTTCAGCCGCCACCAAGGCCATTGTGTGGGGCATGCAGACCCGGGCCGTGCAA
GGCATGCTGGACTTTGACTATGTCTGCTCCCGAGACGAGCCCTCAGTGGCTGCCATGGTC
TACCCTTTCAGTGGGACCACAAGCAGAAGTTTTACTGGGGGCACAAAGAGATCCTGATC
CCTGTCTCAAGAATCGGCTGATGCCATGAGGAAGCATCCGGAGGTAGATGTGCTCATC
AACTTTGCCTCTCCTCGCTCTGCCTATGACAGCACCATGGAGACCATGAACTATGCCAG

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ATCCGGACCATCGCCATCATAGCTGAAGGCATCCCTGAGGCCCTCACGAGAAAGCTGATC
AAGAAGGCGGACCAGAAGGGAGTGACCATCATCGGACCTGCCACTGTTGGAGGCATCAAG
CCTGGGTGCTTTAAGATTGGCAACACAGGTGGGATGCTGGACAACATCCTGGCCTCCAAA
CTGTACCGCCCAGGCAGCGTGGCCTATGTCTCACGTTCCGGAGGCATGTCCAACGAGCTC
AACAAATACATCTCTCGGACCACGGATGGCGTCTATGAGGGCGTGGCCATTGGTGGGGAC
AGGTACCCGGGCTCCACATTCATGGATCATGTGTACGCTATCAGGACACTCCAGGAGTC
AAAATGATTGTGGTTCTTGAGAGATTGGGGGCACTGAGGAATATAAGATTTGCCGGGGC
ATCAAGGAGGGCCGCTCACTAAGCCCATCGTCTGCTGGTGCATCGGGAGGTGTGCCACC
ATGTTCTCCTCTGAGGTCAGTTTGGCCATGCTGGAGCTTGTGCCAACCCAGGCTTCTGAA
ACTGCAGTAGCCAAGAACCAGGCTTTGAAGGAAGCAGGAGTGTGGTGGCCCGGAGCTTT
GATGAGCTTGGAGAGATCATCCAGTCTGTATACGAAGATCTCGTGGCCAATGGAGTCATT
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CTTGGTTTGATCCGCAACCTGCCTCGTTCATGACCAGCATCTGCGATGAGCGAGGACAG
GAGCTCATCTACGCGGCATGCCATCACTGAGGTCTTCAAGGAAGAGATGGGCATTGGC
GGGGTCTCGGCCTCCTCTGGTTCAGAAAAGGTTGCCTAAGTACTCTTGCCAGTTCATT
GAGATGTGTCTGATGGTGACAGCTGATCACGGGCCAGCCGTCTCTGGAGCCACAAACACC
ATCATTGTGCGCGAGCTGGGAAAGACCTGGTCTCCAGCCTCACCTCGGGGCTGCTCACC
ATCGGGGATCGGTTTGGGGTGCCTTGGATGCAGCAGCCAAGATGTTTCAAGCCTTT
GACAGTGGCATTATCCCATGGAGTTTGTGAACAAGATGAAGAAGGAAGGGAAGCTGATC
ATGGGCATTGGTCACCGAGTGAAGTCGATAAAACAACCCAGACATGCGAGTGCAGATCCTC
AAAGATTACGTCAGGCAGCACTTCCCTGCCACTCCTCTGCTCGATTATGCACTGGAAGTA
GAGAAGATTACCACCTCGAAGAAGCCAAATCTTATCCTGAATGTAGATGGTCTCATCGGA
GTGCGATTTGTAGACATGCTTAGAAACTGTGGTCCTTTACTCGGGAGGAAGCTGATGAA
TATATTGACATTGGAGCCCTCAATGGCATCTTTGTGCTGGGAAGGAGATGGGGTTCATT
GGACACTATCTTGATCAGAAGAGGCTGAAGCAGGGGCTGTATCGTCATCCGTGGGATGAT
ATTTTCATATGTTCTTCCGGAACACATGAGCATG

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- Restriction Sites:** Please inquire
- ACCN:** NM_198830
- 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).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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_198830.1](#), [NP_942127.1](#)

RefSeq Size:	4420 bp
RefSeq ORF:	3276 bp
Locus ID:	47
UniProt ID:	P53396
Cytogenetics:	17q21.2
Protein Families:	Druggable Genome
Protein Pathways:	Citrate cycle (TCA cycle), Metabolic pathways
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> <p>Transcript Variant: This variant (2) has an alternate splice site, which results in translation initiation at a downstream AUG start codon, and lacks an in-frame coding exon, compared to variant 3. The resulting isoform (2) is shorter at the N-terminus and lacks an internal segment, compared to isoform 3.</p>