

Product datasheet for **RC240008**

ATP citrate lyase (ACLY) (NM_001303274) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP citrate lyase (ACLY) (NM_001303274) 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:	>RC240008 representing NM_001303274 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGCGGGAAAAGTCCGGCTGGGCCGGGACAAAAGCCGGATCCCGGAAGCTACCGGCTGCTGGGG
TGCTCCGATTTTGC GG GTTCGTCGGCCTGTGGAAGAAGCGCCGCGCACGGACTTCGGCAGAGACAGG
TAGAGCAGGTCTCTCTGCAGCCATGTCGGCCAAGGCAATTCAGAGCAGACGGGCAAAGAACTCCTTTAC
AAGTTCACTGTACCACCTCAGCCATCCAGAATCGGTTCAAGTATGCTCGGGTCACTCCTGACACAGACT
GGGCCCGCTTGTGCAGGACCACCCCTGGCTGCTCAGCCAGAAGTGGTAGTCAAGCCAGACCAGCTGAT
CAAACGTCGTGGAAAAGTGGTCTCGTTGGGGTCAACCTCACTCTGGATGGGGTCAAGTCTGGTGAAG
CCACGGCTGGGACAGGAAGCCACAGTTGGCAAGGCCACAGGCTTCCTCAAGAAGTCTGATCGAGCCCT
TCGTCCCCACAGTCAGGCTGAGGAGTTCTATGTCTGCATCTATGCCACCCGAGAAGGGGACTACGTCT
GTTCCACCACGAGGGGGTGTGGACGTGGGTGATGTGGACGCCAAGGCCAGAAGCTGCTTGTGGCGTG
GATGAGAACTGAATCCTGAGGACATCAAAAAACCTGTTGGTCCACGCCCTGAAGACAAGAAAGAAA
TTCTGGCCAGTTTTATCTCCGGCCTTCAATTTCTACGAGGACTGTACTTCACTACCTCGAGATCAA
TCCCCTTGATGACCAAGATGGAGTCTATGTCCTTGACTTGGCGGCCAAGGTGGACGCCACTGCCGAC
TACATCTGCAAAGTGAAGTGGGGTGACATCGAGTTCCTCCCCCTTCGGCGGGAGGCATATCCAGAGG
AAGCCTACATTGCAGACCTCGATGCCAAAAGTGGGGCAAGCCTGAAGCTGACCTTGTGAACCCAAAGG
GAGGATCTGGACCATGGTGGCCGGGGTGGCGCCTCTGTCGTGTACAGCGATACCATCTGTGATCTAGGG
GGTGTCAACGAGCTGGCAAATATGGGGAGTACTCAGGCGCCCCAGCGAGCAGCAGACCTATGACTATG
CCAAGACTATCCTCTCCCTCATGACCCGAGAGAAGCACCAGATGGCAAGATCCTCATATTGGAGGCGAG
CATCGAAACTTACCAACGTGGCTGCCACGTTCAAGGGCATCGTGAGAGCAATTCGAGATTACCAGGGC
CCCCTGAAGGAGCACGAAGTCACAATCTTTGTCCGAAGAGGTGGCCCCAACTATCAGGAGGGCTTACGGG
TGATGGGAGAAGTCGGGAAGACCACTGGGATCCCATCCATGTCTTTGGCACAGAGACTCATGACGGC
CATTGTGGGCATGGCCCTGGGCCACCGCCATCCCCAACCCAGCCACCCACAGCGGCCACACTGAAAAC
TTCTCTCAACGCCAGCGGGAGCACATCGACGCCAGCCCCAGCAGGACAGCATCTTTTCTGAGTCCA



GGGCCGATGAGGTGGCGCTGCAAAGAAGGCCAAGCCTGCCATGCCACAAGATTCAGTCCCAAGTCCAAG
ATCCCTGCAAGGAAAGAGCACCACCTCTTCAGCCGCCACCAAGGCCATTGTGTGGGGCATGCAGACC
CGGGCCGTGCAAGGCATGCTGGACTTTGACTATGTCTGCTCCCGAGACGAGCCCTCAGTGGCTGCCATGG
TCTACCTTTCACTGGGGACCACAAGCAGAAGTTTTACTGGGGGCACAAAGAGATCTGTATCCCTGTCTT
CAAGAACATGGCTGATGCCATGAGGAAGCATCCGGAGGTAGATGTGCTCATCAACTTTGCCTCTCCGC
TCTGCCTATGACAGCACCATGGAGACCATGAACATGCCAGATCCGGACCATCGCCATCATAGCTGAAG
GCATCCCTGAGGCCCTCACGAGAAAGCTGATCAAGAAGGCGGACCAGAAGGGAGTGACCATCATCGGACC
TGCCACTGTTGGAGGCATCAAGCCTGGGTGCTTTAAGATTGGCAACACAGGTGGGATGCTGGACAACATC
CTGGCCTCCAAACTGTACCGCCAGGCAGCGTGGCCTATGTCTCACGTTCCGGAGGCATGTCCAACGAGC
TCAACAATATCATCTCTCGGACCACGGATGGCGTCTATGAGGGCGTGGCCATTGGTGGGGACAGGTACCC
GGGCTCCACATTCATGGATCATGTGTTACGCTATCAGGACACTCCAGGAGTCAAAATGATTGTGGTTCTT
GGAGAGATTGGGGCACTGAGGAATATAAGATTGCCGGGCATCAAGGAGGGCCGCTCACTAAGCCCA
TCGTCTGTGGTGCATCGGGACGTGTGCCACCATGTTCTCCTCTGAGGTCCAGTTTGGCCATGCTGGAGC
TTGTGCCAACAGGCTTCTGAACTGCAGTAGCCAAGAACCAGGCTTTGAAGGAAGCAGGAGTGTGTG
CCCCGGAGCTTTGATGAGCTTGGAGAGATCATCCAGTCTGTATACGAAGATCTCGTGGCCATGGAGTCA
TTGTACCTGCCAGGAGGTGCCGCCCAACCGTGCCCATGGACTACTCCTGGGCCAGGGAGCTTGGTTT
GATCCGCAAACTGCCTCGTTCATGACCAGCATCTGCGATGAGCGAGGACAGGAGCTCATCTACCGGGC
ATGCCCATCACTGAGGTCTTCAAGGAAGAGATGGGCATTGGCGGGTCTCGGCCTCCTCTGTTCCAGA
AAAGGTTGCCTAAGTACTCTTGCCAGTTCATTGAGATGTGTCTGATGGTGACAGCTGATCACGGCCAGC
CGTCTCTGGAGCCACAACACCATCATTTGTGCGGAGCTGGGAAAGACCTGGTCTCCAGCCTCACCTCG
GGGCTGCTCACCATCGGGGATCGGTTTGGGGTGCCTTGGATGCAGCAGCCAAGATGTTCCAGTAAAGCCT
TTGACAGTGGCATTATCCCATGGAGTTTGTGAACAAGATGAAGAAGGAAGGAAGCTGATCATGGGCAT
TGGTACCGAGTGAAGTCGATAAACAACCCAGACATGCGAGTGCAGATCCTCAAAGATTACGTGAGGCAG
CACTTCCCTGCCACTCCTCTGCTCGATTATGCACTGGAAGTAGAGAAGATTACCACCTCGAAGAAGCCAA
ATCTTATCCTGAATGTAGATGGTCTCATCGGAGTCGCATTTGTAGACATGCTTAGAACTGTGGTCCCTT
TACTCGGGAGGAAGCTGATGAATATATTGACATTGGAGCCCTCAATGGCATCTTTGTGCTGGGAAGGAGT
ATGGGGTTCATTGGACACTATCTTGATCAGAAGAGGCTGAAGCAGGGGCTGTATCGTCATCCGTGGGATG
ATATTTTCATATGTTCTTCCGGAACACATGAGCATG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAAGTTTAA

Protein Sequence: >RC240008 representing NM_001303274
 Red=Cloning site Green=Tags(s)

MGAGKSPAGPGQKPDPGKLPAAAGVLRILRGSSGLWKKRRARTSAETGRAGLSAAMSAKAISEQTGKELLY
 KFICTTSAIQNRFKYARVTPDWDARLLQDHPWLLSQNLVVKPDQLIKRRGKLGVLGVNLTLDGKSWLK
 PRLGQEA TVGKATGFLKNFLIEFPVPHSQAEFVYCIYATREGDYVLFHHEGGVDVDDAKAQKLLVGV
 DEKLNPEDIKKHLLVHAPEDKKEILASFISGLNFYEDLYFTYLEINPLVVTKDGVYVLDLAAKVDATAD
 YICKVKWGDIEFPPPFGREAYPEEAYIADLDAKSGASLKLTLNPKGRIWTMVAGGGASVVYSDTICDLG
 GVNELANYGEYS GAPSEQQTYDYAKTILSLMTREKHPDGKILIIIGGSIANFTNVAATFKGIVRAIRDYQG
 PLKEHEVTIFVRRGGPNYQEGLRVMGEVGTGIPIHVFGTETHMTAIVGMALGHRPIPQPPTAAHTAN
 FLLNASGSTSTPAPSRTASFSESRADEVAPAKKAKPAMPQDSVSPRSLQKSTTLFSRHTKAIWGMQT
 RAVQGMDFDYVCSRDEPSVAAMVYPFTGDHKQKFWGHKEILIPVFNKADAMRKHPEVDVLIINFASLR
 SAYDSTMETMNYAQIRTAIIAEGIPEALTRKLIKADQKGVTTIIGPATVGGIKPGCFKIGNTGGMLDNI
 LASKLYRPGSVAYVSRSGMSNELNIIISRTTDGVYEGVAIGDRYPGSTFMDHVLRYQDTPGVKMI VVL
 GEIGGTEEYKICRGIKEGRLTKPIVCWCIGTCATMFSSEVQFGHAGACANQASETAVAKNQALKEAGV FV
 PRSFDDELGEIIQSVYEDLVANGVIVPAQVPPPTVPM DYSWARELGLIRKPASFMTSICDERGQELIYAG
 MPITEVFKEEMGIGGVLGLLWFQKRLPKYSCQFIEMCLMVTADHGPAVSGAHTIICARAGKDLVSSLTS
 GLLTIGDRFGGALDAAAKMFSKAFDSGIIPMEFVNKMKKEGKLIMGIGHRVKSINNPDMRVQILKDYVRQ
 HFPATPLLDYALEVEKITTSKPNLILNVDGLIGVAFVMDLRNCGSFTREEADEYIDIGALNGIFVLGRS
 MGFIGHYLDQKRLKQGLYRHPWDDISYVLP EHMMS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

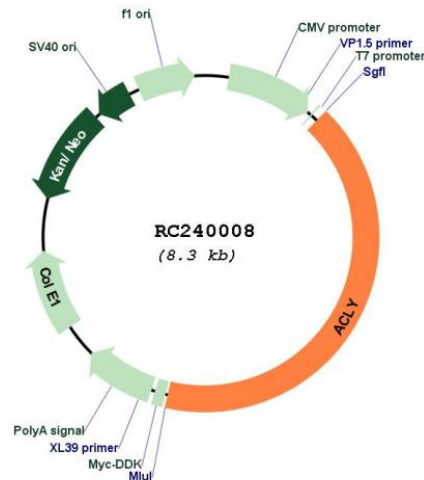
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001303274

ORF Size: 3465 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_001303274.1](#), [NP_001290203.1](#)

RefSeq Size: 4369 bp

RefSeq ORF: 3468 bp

Locus ID: 47

UniProt ID: [P53396](#)

Cytogenetics: 17q21.2

Protein Families:	Druggable Genome
Protein Pathways:	Citrate cycle (TCA cycle), Metabolic pathways
MW:	126.7 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>