

Product datasheet for **RG200508**

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:	TurboGFP
Symbol:	ATP citrate lyase
Synonyms:	ACL; ATPCL; CLATP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG200508 representing NM_001096 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCGGCCAAGGCAATTCAGAGCAGACGGGCAAGAAGCTCCTTTACAAGTTCATCTGTACCACCTCAG
CCATCCAGAATCGGTTCAAGTATGCTCGGGTCACTCCTGACACAGACTGGGCCGCTTGTGCAGGACCA
CCCCTGGTGTCTCAGCCAGAAGTGGTAGTCAAGCCAGACCAGCTGATCAAACGTCGTGGAAAAGTGGT
CTCGTTGGGGTCAACCTCACTCTGGATGGGGTCAAGTCTGGCTGAAGCCACGGCTGGGACAGGAAGCCA
CAGTTGGCAAGGCCACAGGCTTCTCAAGAAGTCTGATCGAGCCCTTCGTCCCCACAGTCAGGCTGA
GGATTCTATGTCTGCATCTATGCCACCCGAGAAGGGGACTACGTCCTGTTCCACCACGAGGGGGTGTG
GACGTGGGTGATGTGGACGCCAAGGCCAGAAAGCTGCTTGTGGCGTGGATGAGAAAAGTGAATCCTGAGG
ACATCAAAAAACCTGTTGGTCCACGCCCTGAAGACAAGAAAGAAATTCGGCCAGTTTTATCTCCGG
CCTCTTCAATTTCTACGAGGACTTGTACTTACCTACCTCGAGATCAATCCCCTTGTAGTGACCAAAGAT
GGAGTCTATGTCTTACTTGGCGGCCAAGGTGGACGCCACTGCCGACTACATCTGCAAAGTGAAGTGGG
GTGACATCGAGTCCCTCCCCCTTCGGGCGGGAGGCATATCCAGAGGAAGCCTACATTGCAGACCTCGA
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GGGGTGGCGCCTCTGTCTGTACAGCGATACCATCTGTGATCTAGGGGGTGTCAACGAGCTGGCAAAT
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GACCCGAGAGAAGCACCCAGATGGCAAGATCCTCATCATTGGAGGCAGCATCGAAAAGTTCACCAACGTG
GCTGCCACGTTCAAGGGCATCGTGAGAGCAATTCGAGATTACCAGGGCCCCCTGAAGGAGCACGAAGTCA
CAATCTTTGTCCGAAGAGGTGGCCCAACTATCAGGAGGGCTTACGGGTGATGGGAGAAGTCGGGAAGAC
CACTGGGATCCCCATCCATGTCTTTGGCACAGAGACTCACATGACGGCCATTGTGGGCATGGCCCTGGGC
CACCGGCCATCCCCAACAGCCACCCACAGCGGCCCACTGCAAAGTCTCTCTCAACGCCAGCGGGA
GCACATCGAGCCAGCCCCAGCAGGACAGCATTTTTTCTGAGTCCAGGGCCGATGAGGTGGCGCTGC
AAAGAAGGCCAAGCCTGCCATGCCACAAGATTCAGTCCCAAGTCCAAGATCCCTGCAAGGAAAGAGCACC



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ACCTCTTCAGCCGCCACCAAGGCCATTGTGTGGGGCATGCAGACCCGGGCCGTGCAAGGCATGCTGG
 ACTTTGACTATGTCTGCTCCCGAGACGAGCCCTCAGTGGCTGCCATGGTCTACCCTTTACTGGGGACCA
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 TATATTGACATTGGAGCCCTCAATGGCATCTTTGTGCTGGGAAGGAGTATGGGGTTCATTGGACACTATC
 TTGATCAGAAGAGGCTGAAGCAGGGGCTGTATCGTCATCCGTGGGATGATATTCATATGTTCTCCGGA
 ACACATGAGCATG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG200508 representing NM_001096
 Red=Cloning site Green=Tags(s)

MSAKAISEQTGKELLYKFICTTSAIQNRFKYARVTPDWDWARLLQDHPWLLSQNLVVKPDQLIKRRKLG
 LVGVNLTLDGVKSWLKPRLGQEAIVGKATGFLKNFLIEPFVPHSQAEFVYCIYATREGDYVLFHHEGGV
 DVGVDVDAKAQKLLVGVDEKLNPEIDIKHLLVHAPEDKKEILASFISGLFNFYEDLYFTYLEINPLVVTKD
 GVVYVLDLAAKVDATADYICKVKWGDIEFPPPFGREAYPEEAYIADLDAKSGASLKLTLNPKGRIWTMVA
 GGGASVVYSDTICDLGGVNELANYGEYSGAPSEQQTYDYAKTILSLMTREKHPDGKILIIIGGSIANFTNV
 AATFKGIVRAIRDYQGPKHEHEVTIFVRRGGPNYQELRVMGEVGTGPIHVFGETHMTAIVGMALG
 HRPINQPPTAAHTANFLLNASGSTSTPAPSRTASFSESRADDEVAPAKKAKPAMPQDSVPSRSLQKST
 TLFSTRHTKAIIVGMQTRAVQGMDFDYVCSRDEPSVAAMVYPFTGDHKQKFWGHKEILIPVFKNMADAM
 RKHPEVDVLIINFASLRSAYDSTMETMNYAQIRTAIIAEGIPEALTRKLIKADQKGVTTIIGPATVGGIK
 PGCFKIGNTGMLDNILASKLYRPGSVAYVSRGGMSNELNIIISRTTDGVYEGVAIGGDRYPGSTFMDH
 VLRYQDTPGVKMIIVLGEIGGTTEEYKICRGIKEGRLTKPIVCWCIGTCATMFSSEVQFGHAGACANQASE
 TAVAKNQALKEAGVFVPRSFDELGEIIQSVYEDLVANGVIVPAQEVPPPTVPMDSWARELGLIRKPASF
 MTSICDERGQELIYAGMPITEVFKEEMGIGGVLGLLWFQKRLPKYSCQFIEMCLMVTADHGPAVSGAHT
 IICARAGKDLVSSLTSGLLTIGDRFGGALDAAAKMFSKAFDSGIIPMEFVNKMKKEGKLIMGIGHRVKSI
 NNPDMRVQILKDYVRQHFPATPLLDYALEVEKITTSKPNLILNVDGLGVAFVMDLRNCGSFTREEADE
 YIDIGALNGIFVLGRSMGFIGHYLDQKRLKQGLYRHPWDDISYVLPHEHMSM

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


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:

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

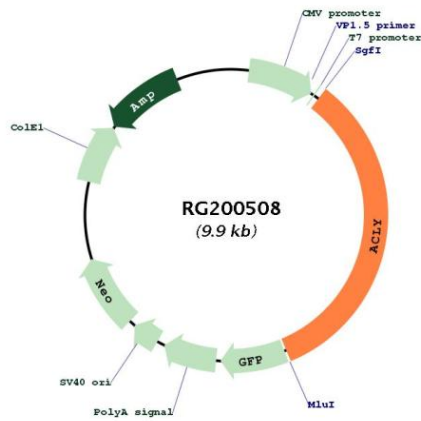
Domains: CoA_binding, ligase-CoA

Protein Families: Druggable Genome

Protein Pathways: Citrate cycle (TCA cycle), Metabolic pathways

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 cholesterol synthesis. 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:



Circular map for RG200508