

## Product datasheet for **RG240006**

### 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:                      | TurboGFP   |
| Symbol:                   | ACLY   |
| Synonyms:                 | ACL; ATPCL; CLATP  |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-AC-GFP (PS100010)  |
| E. coli Selection:        | Ampicillin (100 ug/mL)   |
| ORF Nucleotide Sequence:  | >RG240006 representing NM_001303275.<br>Blue=ORF Red=Cloning site Green=Tag(s) |

```
GCTCGTTT TAGTGAACCGTCAGAATTTTGT AATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCC GCGATCGCC
ATGGGGGCGGGAAAAGTCCGGCTGGGCGGGACAAAAGCCGGATCCCGGGAAGCTACCGGCTGCTGGG
GTGCTCCGGATTTTGC GGGGTTTCGTGGGCTGTGGAAGAAGCGCCGCGCACGGACTTCGGCAGAGACA
GGTAGAGCAGGTCTCTCTGCAGCCATGTCGGCCAAGGCAATTTTCAGAGCAGACGGGCAAAGAACTCCTT
TACAAGTTCATCTGTACCACCTCAGCCATCCAGAATCGGTTCAAGTATGCTCGGGTCACTCCTGACACA
GACTGGGCGCGTTGCTGCAGGACCACCCTGGCTGCTCAGCCAGAACTGGTAGTCAAGCCAGACCAG
CTGATCAAACGTGCTGAAAACCTGGTCTCGTTGGGGTCAACCTCACTCTGGATGGGGTCAAGTCTGG
CTGAAGCCACGGCTGGGACAGGAAGCCACAGTTGGCAAGGCCACAGGCTTCTCAAGAACTTTCTGATC
GAGCCCTTCGTCCCCACAGTCAGGCTGAGGAGTTCTATGCTGTCATCTATGCCACCCGAGAAGGGGAC
TACGTCCTGTTCCACCACGAGGGGGGTGTGGACGTGGGTGATGTGGACGCCAAGGCCAGAACTGCTT
GTTGGCGTGGATGAGAACTGAATCCTGAGGACATCAAAAAACACCTGTTGGTCCACGCCCTGAAGAC
AAGAAAGAAATTCGGCCAGTTTATCTCCGGCTCTTCAATTTCTACGAGGACTGTACTTCACCTAC
CTCGAGATCAATCCCCTGTAGTGACCAAAGATGGAGTCTATGTCCTTGACTTGGCGCCAAGGTGGAC
GCCACTGCCGACTACATCTGCAAAGTGAAGTGGGGTGACATCGAGTTCCCTCCCCCTTCGGGCGGGAG
GCATATCCAGAGGAAGCCTACATTGCAGACCTCGATGCCAAAAGTGGGGCAAGCCTGAAGTGCACCTTG
CTGAACCCCAAAGGGAGGATCTGGACCATGGTGGCCGGGGTGGCGCCTCTGTCTGTACAGCGATACC
ATCTGTGATCTAGGGGTGTCAACGAGCTGGCAAACATATGGGGAGTACTCAGCGCCCCCAGCGAGCAG
CAGACCTATGACTATGCCAAGACTATCCTCTCCCTCATGACCCGAGAGAAGCACCCAGATGGCAAGATC
CTCATATTGGAGGCAGCATCGCAAACCTCACCAACGTGGCTGCCACGTTCAAGGCATCGTGAGAGCA
ATTCGAGATTACCAGGGCCCCCTGAAGGAGCACGAAGTCAACAATCTTTGTCCGAAGAGGTGGCCCCAAC
TATCAGGAGGGCTTACGGGTGATGGGAGAAGTCGGGAAGACCCTGGGATCCCCATCCATGTCTTTGGC
ACAGAGACTCACATGACGGCCATTGTGGGCATGGCCCTGGGCCACCGGCCATCCCCAACCGCCACCC
ACAGCGGCCACACTGCAAACCTCCTCCTCAACGCCAGCGGGAGCACATCGACGCCAGCCCCAGCAGG
```



[View online >](#)

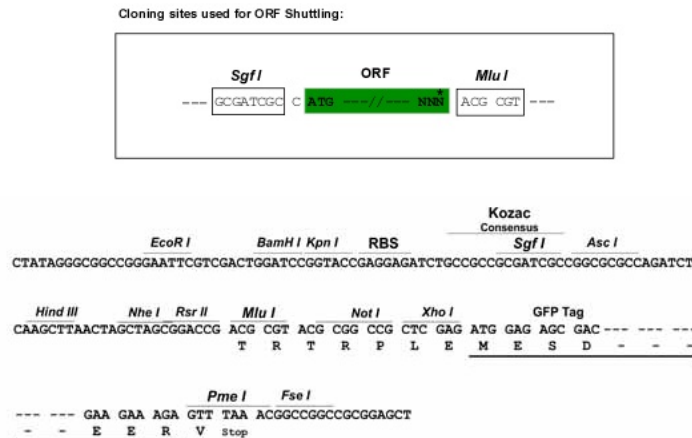
ACAGCATCTTTTCTGAGTCCAGGGCCGATGAGGTGGCGCCTGCAAAGAAGGCCAAGCCTGCCATGCCA  
CAAGGAAAGAGCACCACCCTCTTCAGCCGCCACACCAAGGCCATTGTGTGGGGCATGCAGACCCGGGCC  
GTGCAAGGCATGCTGGACTTTGACTATGTCTGCTCCCGAGACGAGCCCTCAGTGGCTGCCATGGTCTAC  
CCTTTCACTGGGGACCACAAGCAGAAGTTTTACTGGGGGCACAAAGAGATCTGATCCCTGTCTTCAAG  
AACATGGCTGATGCCATGAGGAAGCATCCGGAGGTAGATGTGCTCATCACTTTGCCTCTCTCCGCTCT  
GCCTATGACAGCACCATGGAGACCATGAECTATGCCAGATCCGGACCATCGCCATCATAGCTGAAGGC  
ATCCCTGAGGCCCTCACGAGAAAGCTGATCAAGAAGGCGGACCAGAAGGGAGTGACCATCATCGGACCT  
GCCACTGTTGGAGGCATCAAGCCTGGGTGCTTTAAGATTGGCAACACAGGTGGGATGCTGGACAACATC  
CTGGCCTCCAAACTGTACCGCCAGGCAGCGTGGCCTATGTCTCACGTTCCGGAGGCATGTCCAACGAG  
CTCAACAATATCATCTCTCGGACCACGGATGGCGTCTATGAGGGCGTGGCCATTGGTGGGACAGGTAC  
CCGGGCTCCACATTCATGGATCATGTGTTACGCTATCAGGACACTCCAGGAGTCAAAATGATTGTGGTT  
CTTGGAGAGATTGGGGCACTGAGGAATATAAGATTTGCCGGGCATCAAGGAGGGCCGCTCACTAAG  
CCCATCGTCTGCTGGTGCATCGGACGTGTGCCACCATGTTCTCCTCTGAGGTCCAGTTTGGCCATGCT  
GGAGCTTGTGCCAACCAGGCTTCTGAAACTGCAGTAGCCAAGAACCAGGCTTTGAAGGAAGCAGGAGTG  
TTTGTGCCCGGAGCTTTGATGAGCTTGGAGAGATCATCCAGTCTGTATACGAAGATCTCGTGGCCAA  
GGAGTCATTGTACCTGCCAGGAGGTGCCGCCCAACCGTGCCATGGACTACTCTGGGCCAGGGAG  
CTTGGTTTGATCCGCAAACCTGCCTCGTTCATGACCAGCATCTGCGATGAGCGAGGACAGGAGCTCATC  
TACGCGGGCATGCCATCACTGAGGTCTTCAAGGAAGAGATGGGCATTGGCGGGTCTCTCGGCTCCTC  
TGGTTCAGAAAAGGTTGCCTAAGTACTCTTGCCAGTTCATTGAGATGTGTCTGATGGTGACAGCTGAT  
CACGGGCCAGCCGTCTCTGGAGCCACAACACCATCATTTGTGCGCGAGCTGGGAAAGACCTGGTCTCC  
AGCCTCACCTCGGGCTGCTCACCATCGGGATCGGTTTGGGGTGCCTTGGATGCAGCAGCCAAGATG  
TTCAGTAAAGCCTTTGACAGTGGCATTATCCCCATGGAGTTTGTGAACAAGATGAAGAAGGAAGGGAAG  
CTGATCATGGGCATTGGTCACCGAGTGAAGTCGATAAACAACCCAGACATGCGAGTGCAGATCCTCAA  
GATTACGTCAGGCAGCACTTCCCTGCCACTCCTCTGCTCGATTATGCACTGGAAGTAGAGAAGATTACC  
ACCTCGAAGAAGCCAAATCTTATCCTGAATGTAGATGGTCTCATCGGAGTCGATTTGTAGACATGCTT  
AGAAACTGTGGTCTTTACTCGGGAGGAAGCTGATGAATATATTGACATTGGAGCCCTCAATGGCATC  
TTTGTGCTGGGAAGGAGTATGGGGTTCATTGGACACTATCTTGATCAGAAGAGGCTGAAGCAGGGGCTG  
TATCGTCATCCGTGGGATGATATTTTATATGTTCTTCCGGAACACATGAGCATG  
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC

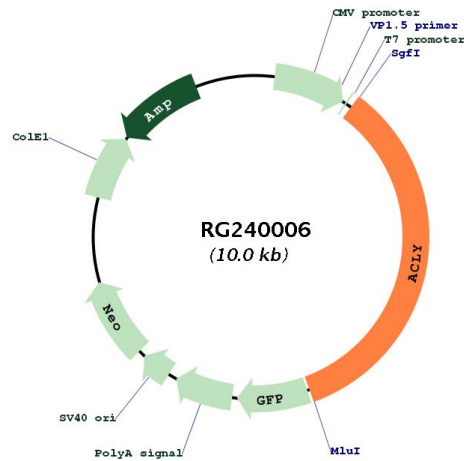
Protein Sequence: >Peptide sequence encoded by RG240006  
 Blue=ORF Red=Cloning site Green=Tag(s)

MGAGKSPAGPGQKPDPGKLPAAAGVLRILRGSSGLWKKRRARTSAETGRAGLSAAMSAKAISEQTGKELL  
 YKFICTTSAIQNRFKYARVTPD TDWARLLQDHPWLLSQNLVVKPDQLIKRRGKGLGVGNLTL DGVKSW  
 LKPRLGQEATVGKATGFLKNFLIEPFVPHSQAEFVYCIYATREGDYVLFHHEGGVDVGDVAKAQKLL  
 VGVDEKLNPEDIKKHLLVHAPEDKKEILASFISGLFNFYEDLYFTYLEINPLVVTKDGVYVLDLAAKVD  
 ATADYICKVKWGDIEFPFPFGREAYPEEAYIADLDAKSGASLKL TLLNPKGRIWTMVAGGGASVYSDT  
 ICDLGGVNELANYGEYS GAPSEQQTYDYAKTILSLMTREKHPDGKIL IIGGSIANFTNVAATFKGIVRA  
 IRDYQGPKLKEHEVTIFVRRGGPNYQEGLRVMGEVGTGPIHVFGTETHMTAIVGMALGHRPIPNQPP  
 TAAHTANFLLNASGSTSTPAPSRTASFSESRADEVAPAKKAKPAMPQGKSTTLFSRHTKAIWGMQTRA  
 VQGMLDFDYVCSRDEPSVAAMVYPFTGDHKQKFWGHKEILIPVFKNMADAMRKHPEVDLINFASLRS  
 AYDSTMETMNYAQIRTAIAIAEGIPEALTRKLIKADQKGVTIIGPATVGGIKPGCFKIGNTGGMLDNI  
 LASKLYRPGSVAYVSRSGMSNELNIIISRTTDGVYEGVAIGDRYPGSTFMDHVLRYQDTPGVKMI VV  
 LGEIGGTEEYKICRGIKEGRLTKPIVCWICGTCATMFSSEVQFGHAGACANQASETAVAKNQALKEAGV  
 FVPRSFDELGEIIQSVYEDLVANGVIVPAQEVPPPTVPMDYSWARELGLIRKPASFMTSICDERGQELI  
 YAGMPITEVFKEEMGIGGVLGLLWFQKRLPKYSCQFIEMCLMVTADHGPVYSGAHNTIICARAGKDLVS  
 SLTSGLLTIGDRFGGALDAAAKMFSKAFDSGIIPMEFVNKMKKEGKLMIGIGHRVKSINNPDMRVQILK  
 DYVRQHF PATPLLDYALEVEKITT SKPNLILNVDGLIGVAFVMDLRNCGSFTREEADEYIDIGALNGI  
 FVLGRSMGFIGHYLDQKRLKQGLYRHPWDDISYVLPEHMSM  
 TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV  
 MGYGFYHFGTYPSTYENPFLHAINNGGYTNTRIEKYEDGGVLHVSFSYRYEAGRVI GDFKVMGTGFPEP  
 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

Restriction Sites: SgfI-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).

**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:**

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]