

## Product datasheet for **MG226305**

### Adcy7 (NM\_007406) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Adcy7 (NM_007406) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Adcy7
Synonyms:	AA407758
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG226305 representing NM_007406 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCAGCCAAGGGGCGCTACTTCCTAAATGAGGGTGATGAAGGCCCGACCAGGCAGCGCTCTATGAGA  
AGTACCGGCTCACCAGCTTGACGGGCCACTGTGCTCTTGCTCCTCTGGTGGCCGCGGCCACCTGCAT  
TGCGCTCATCAGCATCGCCTTCAGTCATGAGGATCTCCGCAGACACCAGGTTGCCTGGGACTGCGTTC  
CTCATGCTGACGCTGTTTGTGGCTCTCTATGTGCTGGTGTATGTCGAGTGCCTGGTGCAGCGGTGGCTGC  
GGCCTTGGCGCTACTCACCTGGGCTTGCCTCATGGTACTAGGCTCCGTGCTGATGTGGACTCTTTGGA  
GAATGAAGCCCATGCGTGGGAGCAGGTGCCTTTCTCCTGTTTGTGCTCTTTGTGGTGTATGCACTACTG  
CCTCTCAGCAGGAGGGCAGCCATCGTGGTAGGCGTGACCTCCACGGTCTCCCATCTCCTGGTGTGGAG  
CTGTGACAAGAGCCTTCCAGACGTCCATGTCTAGCACTCAACTGGGGCTGCAGCTCCTGGCCAATGCCGT  
TATTCTCCTGGGTGGAACTTACGGGTGCCTTCCACAAGCACCAGCTGCAGGACGCGTCCAGGGATCTC  
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GGGTGGTGACCGACTACATGCCCGACAACAACCTTTCACAGCCTCTATGTCAAGCGGCACCAGAATGTC  
AGCATCTTGTATGCAGACATCGTGGGCTTACGAGGCTGGCCAGGACTGCTCTCCAAGGAGCTGGTGG  
TGGTGCTCAACGAGCTGTTTGGGAAGTTTGACCAGATTGCTAAGGCCAATGAGTGCATGCCGATCAAGAT  
CCTGGGTGACTGTTACTACTGCGTGTGACGGCTGCCCGTATCGCTGCCACACATGCCCGCAACTGTGTG  
AAGATGGGTCTGGACATCTGCGAGGCCATTAAGCAGGTGCGTGAGGCCACGGGCGTGACATCAGCATGC  
GTGTGGGCATTCCTCCGGGAATGTGCTATGTGGGTCATCGGGCTCCGTAAGTGGCAGTATGATGTGTG  
GTCCCATGATGTGTCCTGGCCAACAGGATGGAGGCAGCTGGAGTCCCTGGCCGGGTGCACATCACAGAG  
GCAACATTGAATCACCTGGACAAGGCATACGAGGTGGAGGATGGGCATGGGGAGCAGCGAGACCCCTATC  
TGAAAGAGATGAACATCCGAACCTACCTGGTGTGATCGATCCCGGAGCCAGCAGCCACCCCAACCCAGCCA  
CCACCTCTCAAGCCAAGGGGACGCAACTCTGAAGATGCGGGCTTCAGTGCCTGTAACCCGCTATCTG



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GAGTCTTGGGGGCGAGCACGGCCCTTTGCACACCTCAACCACCGGAGAGTGTGAGCAGCAGTGAGACCC  
 CCATCTCCAATGGACGGAGGCAGAAAGGCCATTCTCTGCGTGCACACCGTGCCCTGATAGGAGTGCATC  
 CCCAAGGGGCGCTTGAAGATGACTGTGATGACGAGATGCTGTGACGCCATTGAGGGTCTCAGCTCCACC  
 AGGCCCTGCTGCTCAAGTCTGATGACTTCCACACCTTTGGTCCCATCTTCTGGAGAAGGGCTTTGAGC  
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 CTTCCGCTCCGAGTCGGCATAAACACGGCCCTGTGATTGCTGGAGTATTGGAGCAGCAAGCCTCA  
 GTATGACATCTGGGAAACACAGTCAATGTTGCCAGCCGATGGAGAGCACCGGAGACTTGGGAAATC  
 CAGGTTACCGAAGAGACATGCACTATCCTCCAGGACTCGGATATTCTGTGAATGCCGTGGGCTGATCA  
 ACGTCAAAGGCAAAGGGAACTGCGGACTTACTTTGTATGTACAGACACTGCCAAGTTTCAAGGGCTGG  
 GCTAAAC

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

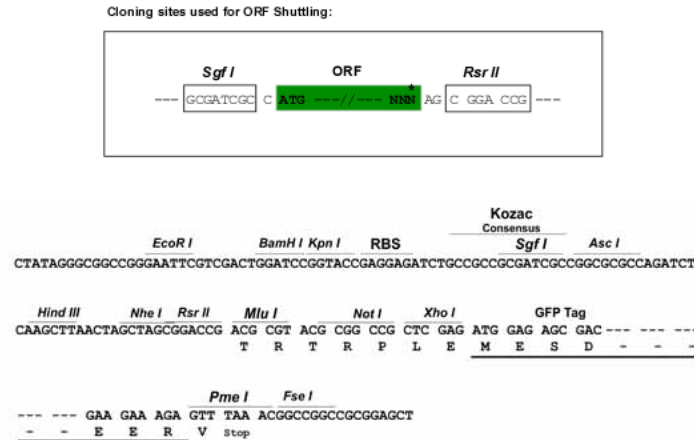
>MG226305 representing NM\_007406  
 Red=Cloning site Green=Tags(s)

MPAKGRYFLNEGDEGPDQAALYEKRYRLTSLHGPLLLLLLVAATCIALISIAFSHEDLRRHQVVLGTAF  
 LMLTLFVALYVLYVECLVQRWLRALALLTWACLMVLGSVLMWDSLENEAHAWEQVFFLVVVFVYALL  
 PLSRRAIIVVGVSTVSHLLVFGAVTRAFQTSMSSTQLGLQLLANAVILLGGNFTGAFHKHQLDASRDL  
 FIYTVKCIQIRKLRVEKRQENLLL SVLPAHISMGMKLAIIERLKEGGDRHYMPDNNFHSLYVKRHQNV  
 SILYADIVGFTRLASDCSPKELVVVLNELFGKFDQIAKANECMRIKILGDCYYCVSGLPVSLPTHARNCV  
 KMGLDICEAIKQVREATGVDISMRVGIHSGNVLCGVIGLRWQYDVWSDVSLANRMEAAGVPGRVHITE  
 ATLNHLDKAYEVEDGHGEQRDPYLKEMNIRTYLVIDPRSQQPPPSHHL SKPKGDATLKMRA SVRTRYL  
 ESWGAA RPF AHLNHRESVSSSETPI SNRRQKAIPLRRHRAPDRS ASPKGRLEDDCDEMLSAIEGLSST  
 RPCCSKSDDFHTFGPIFLEKGFEREYRLVIPRARYDFACASLVFCILLVHLLVMPRMATLGVSFGLVA  
 CLLGLVLSFCFATEFSRCFSPRSTLQAISESVETQPLVRLVVLTVGSLLTVAIINMPLTLNPGPEQPG  
 DNKTSPLAAQNRVGTPEYELLPYTCSILGFIACSVFLRMSLELKAMLLTVALVAYLLL FNLSPCWHVSG  
 NSTETNGTQRTRLLLSDAQSMPSHTLAPGAQETAPSPSYLERDLKIMVNFYILFYATLILLSRQIDYYC  
 RLDCLWKKFKKEHEEFETMENVNRLLENVLP AHVAAHF IGDKAAEDWYHQSYDCVCMFASVPDFKVF  
 YTECDVNKEGLECLRLLNEIIADFDLELLKPKFSGVEKIKTIGSTYMAAAGLSAPSGHENQDLERKHVHI  
 GVLVEFSMALMSKLDGINRHSFNSFRLRVGINHGFPVIAGVIGARKPQYDIWGNVTNNVASRMESTGELGKI  
 QVTEETCTILQGLGYSCECRGLINVKGKELRTYFVCTDTAKFQGLGLN

SGPTRRRLE - GFP Tag - V

**Restriction Sites:**

Sgfl-RsrII

**Cloning Scheme:**


**ACCN:** NM\_007406

**ORF Size:** 3297 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

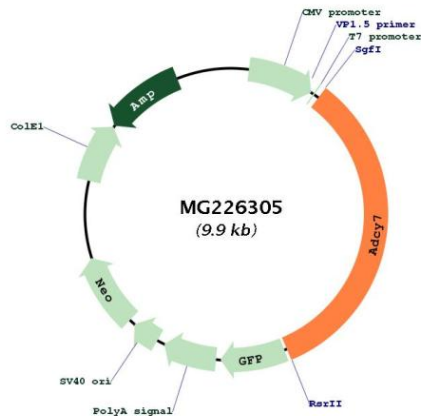
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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\\_007406.1](#)  
**RefSeq Size:** 6121 bp  
**RefSeq ORF:** 3300 bp  
**Locus ID:** 11513  
**UniProt ID:** [P51829](#)  
**Cytogenetics:** 8 43.06 cM

**Gene Summary:** Catalyzes the formation of cAMP in response to activation of G protein-coupled receptors (Probable). Functions in signaling cascades activated namely by thrombin and sphingosine 1-phosphate and mediates regulation of cAMP synthesis through synergistic action of the stimulatory G alpha protein with GNA13 (PubMed:18541530). Also, during inflammation, mediates zymosan-induced increase intracellular cAMP, leading to protein kinase A pathway activation in order to modulate innate immune responses through heterotrimeric G proteins G(12/13) (PubMed:23178822). Functions in signaling cascades activated namely by dopamine and C5 alpha chain and mediates regulation of cAMP synthesis through synergistic action of the stimulatory G protein with G beta:gamma complex (By similarity). Functions, through cAMP response regulation, to keep inflammation under control during bacterial infection by sensing the presence of serum factors, such as the bioactive lysophospholipid (LPA) that regulate LPS-induced TNF-alpha production. However, it is also required for the optimal functions of B and T cells during adaptive immune responses by regulating cAMP synthesis in both B and T cells (PubMed:20505140).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MG226305