

## Product datasheet for MR226305

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

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Adcy7 (NM_007406) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Adcy7
Synonyms:	AA407758
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR226305 representing NM_007406 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCAGCCAAGGGGCGCTACTTCTAAATGAGGGTGATGAAGGCCCGACCAGGCAGCGCTCTATGAGA  
AGTACCGGCTCACCAGCTTGACGGGCCACTGCTGCTCTTGTCTCTCTGGTGGCCGGCCACCTGCAT  
TGGCCTCATCAGCATCGCCTTCAGTCATGAGGATCTCCGCAGACACCAGGTTGTCCTGGGACTGCGTTC  
CTCATGCTGACGCTGTTTGTGGCTCTCTATGTGCTGGTGTATGTCGAGTGCCTGGTGCAGCGGTGGCTGC  
GGGCTTGGCGCTACTCACCTGGGCTTGCTCATGGTACTAGGCTCCGTGCTGATGTGGGACTCTTTGGA  
GAATGAAGCCCATGCGTGGGAGCAGGTGCCTTTCTTCTGTTTGTGCTTTGTGGTGTATGCACTACTG  
CCTCTCAGCAGGAGGGCAGCCATCGTGGCAGGCGTGACCTCCACGGTCTCCCATCTCTGGTGTGGAG  
CTGTGACAAGAGCCTTCCAGACGTCCATGTCTAGCACTCAACTGGGGCTGCAGCTCCTGGCCAATGCCGT  
TATCTCTGGGTGGGAATTCACGGGTGCCTTCCACAAGCACCAGCTGCAGGACCGCTCCAGGGATCTC  
TTTATCTACACCGTCAAATGCATCCAGATCCGTCGGAAGCTTCGTGTGGAGAAGCGCCAGCAGGAGAACC  
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GGTGGTGACCGACACTACATGCCCCGACAACAACCTTCCAGCCTCTATGTCAAGCGCCACCAGAATGTC  
AGCATTTGTATGCAGACATCGTGGGCTTCCAGAGGCTGGCCAGCGACTGCTCTCCAAGGAGCTGGTGG  
TGGTGTCAACGAGCTGTTTGGGAAGTTTGACCAGATTGCTAAGGCCAATGAGTGCATCGGGATCAAGAT  
CCTGGGTGACTGTTACTACTGCGTGTGACGGCTGCCCGTGTGCTGCCCCACACATGCCCCAAGTGTGTG  
AAGATGGGTCTGGACATCTGCGAGGCCATTAAGCAGGTGCGTGAGGCCACGGGCGTGGACATCAGCATGC  
GTGTGGGCATTCACTCCGGGAATGTGCTATGTGGGTGTCGCGCTCCGTAAGTGGCAGTATGATGTGTG  
GTCCCATGATGTGCTCCCTGGCCAACAGGATGGAGGCAGCTGGAGTCCCTGGCCGGGTGCACATCACAGAG  
GCAACATTGAATCACCTGGACAAGGCATATGAGGTGGAGGATGGGCATGGGGAGCAGCGAGACCCCTATC  
TGAAAGAGATGAACATCCGAACCTACCTGGTGTGATCCCCGGAGCCAGCAGCCACCCCAAGGCCA  
CCACTCTCAAGCCCAAGGGGACGCAACTCTGAAGATGCGGGTTCAGTGCCTGTAACCCGCTATCTG



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GAGTCTTGGGGGCGAGCAAGGCCCTTGCACACCTCAACCACCGGAGAGTGTGAGCAGCAGTGAGACCC  
 CCATCTCCAATGGACGGAGGCAGAAAGGCCATTCTCTGCGTCGACACCGTGCCCTGATAGGAGTGCATC  
 TCCAAGGGGCGCTTGAAGATGACTGTGATGACGAGATGCTGTGACCCATTGAGGGTCTCAGCTCCACC  
 AGGCCCTGCTGCTCAAGTCTGATGACTTCCACACCTTGGTCCCATTCTTGGAGAAGGGCTTGGAGC  
 GTGAGTACCGCTGGTGGCCATCCCCGGGCTCGCTACGACTTCGCTGTGCCAGCCTTGTCTTCGTCG  
 CATCTGCTTGTCCACCTTCTAGTGTGCCAGGATGGCAACTCTGGGTGTCTCTTGGTGGTGGCC  
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 CCTTCCGCCTCCGAGTCGGCATAAACCACGGGCTGTGATTGCTGGAGTATTGGAGCAGCAAGCCTCA  
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 CAGTTACCGAAGAGACATGCACTATCCTCCAGGGACTCGGATATTCTGTGAATGCCGTGGGCTGATCA  
 ACGTCAAAGGCAAAGGGAACTGCGGACTTACTTTGTATGACAGACTGCCAAGTTTCAAGGGCTGGG  
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AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

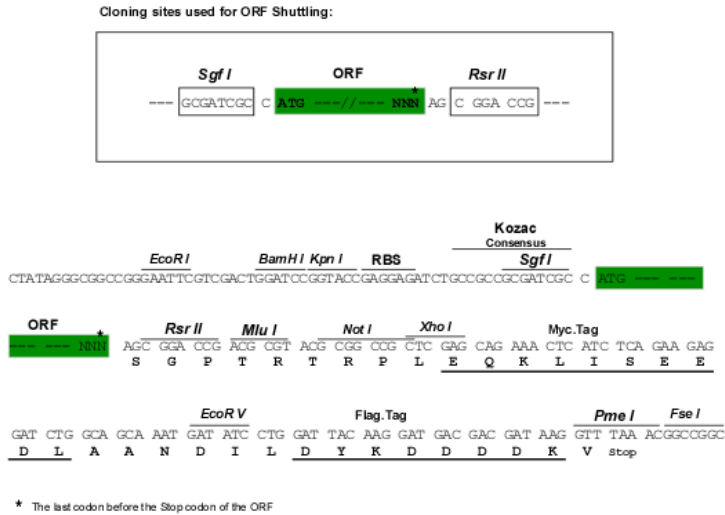
>MR226305 representing NM\_007406  
 Red=Cloning site Green=Tags(s)

MPAKGRYFLNEGDEGPDQALYEKYRLTSLHGPLLLLLLVAATCIALISIAFSHEDLRRHQVVLGTAFL  
 LMLTLFVALYVLYVECLVQRWLRALALLTWACLMVLGSVLMWDSLNEAHAWEQVFFLFVVFVYALL  
 PLSRRAAIVAGVTSTVSHLLVFGAVTRAFQTSMSSTQLGLQLLANAVILLGGNFTGAFHKHQLQDASRDL  
 FIYTVKCIQIRKLRVEKRQENLLSVLPAHISMGMKLAIIERLKEGGDRHYMPDNNFSLYVYKRQNV  
 SILYADIVGFTRLASDCSPKELVVVLNELFGKFDQIAKANECMRKILGDCYCYVSGPLVSLPTHARNCV  
 KMGLDICEAIKQVREATGVDISMRVGIHSGNVLCGVIIGLRKWQYDVWSDVSLANRMEAGVPGRVHITE  
 ATLNHLDKAYEVEDGHGEQRDPYLKEMNIRTYLVIDPRSQQPPPPSHHLSKPKGDATLKMRAVSVRYL  
 ESWGAAARPF AHLNHRESVSSSETPI SNRRRQKA IPLRRHRAPDRSASPKGRLEDDCDEMLSAIEGLSST  
 RPCCSKSDDFHTFGPIFLEKGFEREYRLVPIPRARYDFACASLVFVCILLVHLLVMPRMATLGVSFGLVA  
 CLLGLVL SFCFATEFSRCFSPRSTLQAISESVETQPLVRLVLVVLTVGSLLTVAIINMPLTLNPGPEQPG  
 DNKTSPLAAQNRVGTPECELLPYTCSILGFIACSVFLRMSLELKAMLLTVALVAYLLFNLSPCWHVSG  
 NSTETNGTQRTRLLLSDAQSMPSHTLAPGARETAPSPSYLERDLKIMVNFYILFYATLILLSRQIDYYC  
 RLDCLWKKKFKKEHEEFETMENVNRLLENVLP AHVAHF IGDKAAEDWYHQSYDCVCMFASVPDFKVF  
 YTECDVNKEGLECLRLNEIIADFDELLLKPKFSGVEKIKTIGSTYMAAAGLSAPSGHENQDLERKHVHI  
 GVLVEFSMALMSKLDGINRHSFNSFRLRVGINHPVIAGVIGARKPQYDIWGN TVNVASRMESTGELGKI  
 QVTEETCTILQGLGYSCECRGLINVKGKGLR TYFVCTDTAKFQGLGLN

SGPTRRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-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).

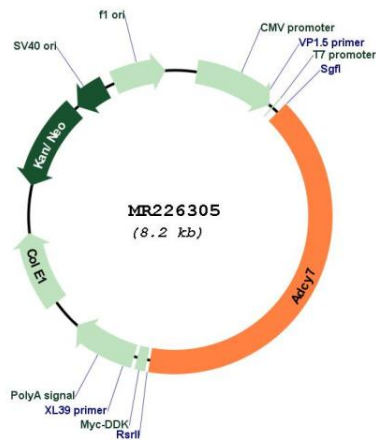
**Reconstitution Method:**

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\\_007406.2, NP\\_031432.2](#)  
**RefSeq Size:** 6121 bp  
**RefSeq ORF:** 3300 bp  
**Locus ID:** 11513  
**UniProt ID:** [P51829](#)  
**Cytogenetics:** 8 43.06 cM  
**MW:** 122.7 kDa

**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 MR226305