

Product datasheet for **RG222738**

Adenylate cyclase 1 (ADCY1) (NM_021116) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Adenylate cyclase 1 (ADCY1) (NM_021116) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Adenylate cyclase 1
Synonyms:	AC1; DFNB44
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG222738 representing NM_021116 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGGGGGCGCCGCGGGCGGAGGCGGGCGGAGGCGGGCGGGCGAGCCGGGGGCGCCGAGCGGG
CGGCCGGACAAGCCGCGGGCGGGCTCCGGGCGTGCACGAGGAGTTCGCTTGCCAGAGCTGGAGGC
GCTGTTCCGCGGCTACACGCTGCGGCTGGAGCAGGCGGCCACGCTGAAGCGCTGGCCGTTCTCAGCCTG
CTGGCGGGCGGCTGGCGCTGGCCGAGCTGCTGGGCGCGCGGGGCCCGCCCGCCGCTGGCCAAGGGCT
CACACCCGGTGCCTGCTCCTTCTCGGCGCTGCTCGTGGTAACCAACGTCCGGTCCCTGCAGGTGCC
CCAGCTGCAGCAGGTCCGCCAGCTGGCGCTGCTTTCAGCCTCACCTTCGCGCTGCTCTGCTGTCCTTTC
GCCTGGGCGGCCCGCCGGGGTTCGCCCGGGCCGCTGGGGGGCCAGCGACCCGAACAAGGGGTTT
GGCAGCTCCTTTTGGTACCTTCGTTGCTCCTATGCCTTGTGCCCCGTGCGCAGCCTGCTGGCCATAGGCTT
TGGGCTCGTGGTGGCTGCGTGCCTTGTGCTCACAGCCACCTTGGTCCCCGCAAGCGCCACGTCTC
TGGAGGACGCTCGGTGCCAATGCCTTGTCTTCGTCGGTGTGAACATGTATGGGTCTTTGTGCGGATTC
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TCCTGTTTGTGACATCGTGGGTTTACGGGCTTGGCATCCAGTGCACAGCCAGGAGCTGGTGAACCT
CCTCAATGAGCTCTTCGCAAGTTCGATGAATTAGCCACGGAGAACCCTGTCGCGCATCAAGATTCTC
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GGGTCTGCACACGGGCAGGGTCTCTGTGGTGTCTGGGCTTGCAGCAAGTGGCAGTACGACGTGTGGTCC
AATGATGTGACCTTGGCCAATGTATGGAAGCCGCTGGCCTGCCAGGGAAGGTTTCATATCACAAGACGA
CCCTAGCGTCTTGAATGGGACTACGAGGTAGAACCAGGTTACGGACATGAGAGGAACAGTTTCTTGAA
AACTCATAACATCGAAACCTTTTTTATTGTGCCATCCCATCGCCGAAAGATATTTCCAGGCTGATTCTC



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TCAGATATAAAACCGGCCAAAAGGATGAAGTTCAGACTGTCTGCTACCTGCTGGTGCAGCTCATGCACT
 GCCGAAAATGTTCAAGGCCGAGATCCCCTTCTCCAATGTCATGACCTGCGAGGACGATGACAAGCGGAG
 GGCATTAAGAACAGCCTCGGAAAACTCAGAAACCGCTCATCTTTTTCTACCAACGTTGTCTACACCACC
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 ACGTGGCCAGTCGGATGGATAGCACAGGGTCCAGGGCAGAATCCAGGTACTGAGGAAGTCCACCGGT
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 ACATACTTTCTAGAAGGCAGGACTGATGAAAACGGCTCCCAAATCAGGTCCTGGCTTGGATCGAAAA
 TGTGTCCATTTGGGAGAGCTGGCCTCAGGGCAGACGTCCTCCCGTGTGCCCATGCCTGGCGTCTCAGT
 CAGGGTGGGCTCCCTCCACTCCCAAGGCCAGTACCTGCCCTGTCAGCAGCTGGGAAGGAGGCT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG222738 representing NM_021116
 Red=Cloning site Green=Tags(s)

MAGAPRGGGGGGGAGEPGGAERAAGTSRRRGLRACDEEFACPELEALFRGYTLRLEQAATLKALAVLSL
 LAGALALAE LLGAPGPAPGLAKGSHPVHCVLFLALLVVTNVRSLQVPQLQQVQQLALLFSLTFALLCCPF
 ALGGPARGSAGAAGGPATAEQGVWQLLLVTFVSYALLPVRSLLAIGFGLVVAASHLLVTATLVPKRPRL
 WRTLGANALLFVGVMYGVFVRILTERSQRKAFQARSCIEDRLREDENEKQERLLMSLLPRNVAMEMK
 EDFLKPPERIFHKIYIQRHDNVSILFADIVGFTGLASQCTAQELVKLLNELFGKFDELATENHCRRIKIL
 GDCYYCVSGLTQPKTDHAHCCVEMGLDMIDTITSVAEATEVDLNMVGLHTGRVLCGVLGLRKWQYDVWS
 NDVTLANVMEAGLPGKVHITKTTLAACNGDYEVEPGYGHERNSFLKTHNIETFFIVPSHRRKIFPGLIL
 SDIKPAKRMKFKTVCYLLVQLMHCRCMKFAEIPFSNVMTCEDDDKRRALRTASEKLRNRSFSTNVVYTT
 PGRVNRNRYISRLLEARQTELEMADLNFFTLKYKHVEREQYHQLQDEYFTSAVVLTLILAALFGLVYLLI
 FPQSVVLLLLVFCICFLVACVLYLHITRVQCFPGCLTIQIRTVLCIFIVVLIYSVAQGCVVGCLPWAWS
 SKPNSSLVVLSSGGQRTALPTLPCESTHALLCCLVGTLP LAIFFRVSSLPKMILLSGLTTSYILVLELS
 GYTRTGGGAVSGRSYEPIVAILLFSCALALHARQVDIRLRDYLWAAQAEEREDMEKVKLDNRRLFNL
 LPAHVAQHFLMSNPRNMDLYYSQVGMFASIPNFDFYIELDGNMGMVECLRLLNEIIADFDLMEK
 DFYKDIKIKITIGSTYMAAVGLAPTSGTKAKKSISSHLSTLADFAIEMFDVLDENYQSYNDFVLRVGIN
 YGPPVAGVIGARRPQYDIWGNTVNVASRMDSTGVQGRIVTEEVHRLRRCPYHFVCRGKVSVKGKGEML
 TYFLEGRTDGNGSQIRSLGLDRKMCPFGRAGLQGRPPVCPMPGVSVRAGLPPHSPGYQLPSAAAGKEA

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_021116

ORF Size: 3357 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 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.

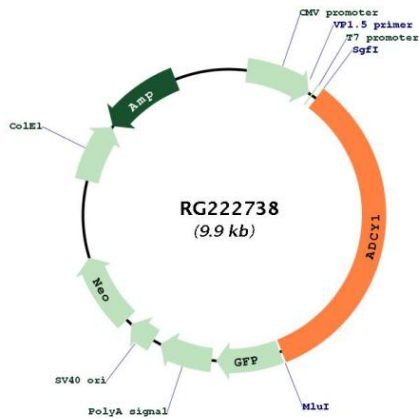
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_021116.4](#)
RefSeq Size: 12499 bp
RefSeq ORF: 3360 bp
Locus ID: 107
UniProt ID: [Q08828](#)
Cytogenetics: 7p12.3
Protein Families: Druggable Genome, Transmembrane
Protein Pathways: Calcium signaling pathway, Chemokine signaling pathway, Dilated cardiomyopathy, Gap junction, GnRH signaling pathway, Long-term potentiation, Melanogenesis, Oocyte meiosis, Progesterone-mediated oocyte maturation, Purine metabolism, Vascular smooth muscle contraction
Gene Summary: This gene encodes a member of the of adenylate cyclase gene family that is primarily expressed in the brain. This protein is regulated by calcium/calmodulin concentration and may be involved in brain development. Alternate splicing results in multiple transcript variants. [provided by RefSeq, Aug 2013]

Product images:



Circular map for RG222738