

Product datasheet for MC224054

Adcy8 (NM_009623) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Adcy8 (NM_009623) Mouse Untagged Clone
Tag: Tag Free
Symbol: Adcy8
Synonyms: AC8; AW060868
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC224054 representing NM_009623
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGCTCTCGGATGTGCACTGCCTTAGTGGCAGCGAGGAAGTCTACACCATCCAACCGACGCCCCGG
 CCGGCGACGACGGGAGCGGCTCTCGGCCGACGGCTGCTGTGGCAGACGGCGTGGCCACATCACGGA
 GCAGCGCTTCATCCACGGGCACCGAGGCGGGCGGGGGTCTCCGCAAAGCCTCGAACCTGCG
 GGCACTGGACCAATCACCACGCCCGCAGCTGTCTAGCGACTCGGTGCTGCCTCTATTCTCTGGGCC
 CCGGAGAGCGAGCGCACAAACCCGGTGGCACCAAGTCTTTCCGGAACGACGCGGGAGCGGCAGTGCCAG
 TGGCAGCGGGGGCGGGGGCGACTTGGGCTTCTACACCTTGACTGTGCCCAAGTAACTCGGATTTCTTC
 CTCAATGGAGGATACAGTACCGAGGGGTCAATTTTCCAACCCTACGCAACTCCTTCAAGTCTCGGGATC
 TGGAGCGCCTCTACCAACGCTATTTCTGGGCCAGAGGCGCAAATCGGAGGTAGTGATGAACGTGTTGGA
 TGTAATAACCAAACTCACCTTTTAGTCTGCCTTGAGCCTGGCCTCGGCTCCAATGGACCCTCTCAAG
 GGCATCCTGTAGGCTTTTCACTGGCATCGAGGTGGTGTCTGCGCCCTCGTGGTGGTCAGGAAGGACA
 ACACCTCCACACTTACCTGCAATACAGCGGCGTGGTCACTTGGGTGGCTATGACCACCCAGATTCTGGC
 AGCAGGCTGGGCTATGGCTTCTGGGCGACGGCATAGGCTACGTGCTTTTACACTCTTCGCCACCTAC
 AGCATGCTTCCCCTGCCTCTCACCTGGGCCATCTTGGCCGGCCTGGGCACATCTTTGCTGCAAGTACCC
 TTCAAGTACTCATACCCAGGCTAGCGGTCTTTCCATCAACCAGGTCTGGCCAGGTGGTGTATTTCAT
 GTGTATGAATACAGCAGGAATCTTCATCAGTTACCTTTTACAGCCGTGCCAGCGCCAGGCTTCTGGAG
 ACCCGGAGGTGTGTGGAGGCCAGGCTCCGCTTGGAGACAGAGAACCAAAGACAGGAGCGGCTTGTGCTGT
 CTGTGCTCCCCAGGTTTGTGCTGCTGAAATGATCAACGACATGACCAATGTGGAGGATGAGCACCTGCA
 GCATCAGTTCCACCGCATCTACATCCATCGCTATGAGAACGTGATATTCTTTTGCAGATGTCAAAGGA
 TTTACCAACTCTACGACCTTGTCTGCTCAGGAGCTGGTCAAGGATGCTCAACGAACTCTTTGCCAGAT
 TCGACCGCTGGCCATGAGCATCACTGTCTTCGATTAAATCTGGGGACTGCTACTACTGTGTGTC
 TGGACTGCTGAGCCCCCGGGACACGCTCATTGCTGTGTTGAAATGGGCTCAGCATGATCAAACCT
 ATCAGGTTTGTGAGATCCAGAACGAAGCAGATGTTGACATGCGAATTGGAATCCATTACAGTCTGTGTC



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TATGTGGTGTGTTGGGCCTGAGGAAATGGCAGTTTGATGTCTGGTCTTGGGATGTGGACATAGCAAACAA
 GCTTGAGTCTGGAGGAATCCCTGGGAGGATTACATTTCTAAAGCCACCCTGGATTGCTCAATGGTGAC
 TATAACGTGGAAGAGGGTCACGGGAAAGAGAGGAACGAATTTGAGGAAGCATAACATAGAGACCTATT
 TGATTAAGCAGCCTGAGGAGAGTTTGTCTGCTTGGCTGAAGACATCGTTAAGGAGTCGGTGAGCTGCTC
 TGACAGGAGAAACAGTGGAGCAACATTCACAGAAGGATCGTGGAGCCCAGAGCTGCCTTCGACAACATC
 GTGGGCAACAGAATACTCTGGCTGCCCTAACAAAGAAATCAATAAATCTGCTTCCAAACCATCTCGCAC
 AAGCTTTGCATGTCCAGTCTGGCCTGAGGAAATTAACAAGAGAATAGAGCATACCATCGACTTGGCGAG
 TGGCGATAAGTTGAGAAGAGAGCATATCAAGCCATTCTCACTGATGTTTTAAAGACTCCAGCCTGGAGCAC
 AAGTATTCTCAAATGAGGGATGAAGTATCAAGTCAAACCTGGTCTGTGCATTTATCGTTCTTCTGTTTA
 TCACTGCAATTCAAAGTTTGCTTCTTCTCAAGGCTGATGCCTATGACTATCCAGTTCTCCATCCTGAT
 CATGCTGCACTCTGCCCTGGTCTCATCACCACAGCAGAAGACTATAAGTGTCTGCCCTCATCCTCCGA
 AAAACCTGCTGTTGGATTAATGAGACCTATCTGGCCCGCAACGTCATCATCTTCGCTTCCATCTTAATTA
 ACTTCTGGGAGCTGCTCAAATATTCTGTGGTGTGATTTGACAAGTCGATACCCTGAAGAACCTGAC
 TTTCAATTCCTCAGCTGTGTTTACAGATATCTGCTCCTACCAGAGTACTTTGTCTTCACTGGGGTGTG
 GCCATGGTGACCTGTGCTGTGTTTCTACGGCTTAACTCTGCTCCTGAAGCTGGCAGTGCTACTCATATGA
 TCGCCATCTACGCCCTGCTCACAGAGACCATCTACGCAGGTCTCTTTCTGAGTTATGACAACCTGAACCA
 CAGTGGAGAAGATTTCTGGGGACCAAGGAAGCATCACTGCTGCTGATGGCCATGTTCTTCTTGTGTG
 TTCTACCATGGACAACAGCTGGAGTACACAGCCCGCTGGATTTCTGTGGCGGTACAGGCCAAAGAGG
 AGATCAACGAGATGAAGGAACAGGGAACACAACGAGAACATGCTGCGCAATATCTTACCAGCCATGT
 GGCCCGCCACTTCTGGGAAAGACAGAGACAATGAGGAGCTGTATTCTCAATCTACGATGCTGTTGGA
 GTGATGTTGCGCTCCATCCCTGGGTTGCGAGACTTCTACTCTCAGACAGAAATGAACAACCAGGGAGTAG
 AATGTCTGCGCTTGTGTAATGAGATCATTGCTGACTTTGATGAGCTGCTCGGGGAGGACCGGTTTCAGGA
 CATTGAGAAGATTAAGACCATTGGTAGTACATACATGGCTGTCTCAGGACTGTCCCAGAGAAACAGCAA
 TGTGAAGATAAAATGGGGACATTTGTGTGCCTGGCTGACTTCTCTTGTCTGACTGAAAGCATACAAG
 AGATCAACAAGCATTCAATCAACAATTTTGAACCTCCGAATCGGCATCAGCCATGGCTCAGTGGTGGCAGG
 TGAATTGGAGCTAAGAAACCACAGTATGACATTTGGGGGAAAACCTGTGAACCTGGCAAGCCGAATGGAC
 AGCACGGGAGTAAGTGGCCGGATCCAAGTTCTGAGGAGACCTACCTTATCCTGAAGGACCAGGGCTTTG
 CCTTTGACTACCGTGGGGAGATATATGTGAAGGGCATCAGTGAACAAGAAGGGAAAATCAAACATACTT
 TCTCCTGGGACGAGTCCAACCAACCCATTATCTTACCCCAAGGAGACTTCCCGGCAATACTCTCTG
 GCTGCGGTTGCTTGGCCTTGCCAGTCTCTCAACAGGCAAAGGCAGAAGCAACTTCTCAACGAGAACA
 GCAATTCGGGCATCATCAAGAGCCATTACAACCGCGGACTTTGCTAACGCCAAGTGGGCCAGAGCCTGG
 AGCACAAGCTGAAGGCACTGACAAATCCGATTTGCCATAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_009623
Insert Size: 3750 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](#)

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_009623.2](#), [NP_033753.2](#)

RefSeq Size: 5064 bp

RefSeq ORF: 3750 bp

Locus ID: 11514

UniProt ID: [P97490](#)

Cytogenetics: 15 29.03 cM

Gene Summary:

Catalyzes the formation of cAMP in response to calcium entry leading to cAMP signaling activation that affect processes such as synaptic plasticity and insulin secretion (PubMed:10864938, PubMed:25403481, PubMed:10482244, PubMed:14585998, PubMed:18448650). Plays a role in many brain functions, such as learning, memory, drug addiction, and anxiety modulation through regulation of synaptic plasticity by modulating long-term memory and long-term potentiation (LTP) through CREB transcription factor activity modulation (PubMed:10482244, PubMed:14585998, PubMed:18448650, PubMed:10864938, PubMed:12441059, PubMed:20638449, PubMed:27234425, PubMed:18222416). Plays a central role in insulin secretion by controlling glucose homeostasis through glucagon-like peptide 1 and glucose signaling pathway and maintains insulin secretion through calcium-dependent PKA activation leading to vesicle pool replenishment (PubMed:25403481). Also, allows PTGER3 to induce potentiation of PTGER4-mediated PLA2 secretion by switching from a negative to a positive regulation, during the IL1B induced-dedifferentiation of smooth muscle cells (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).