

Product datasheet for **KN222906**

ADCY5 Human Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 GFP-puro donor, 1 scramble control
Donor DNA:	GFP-puro
Symbol:	ADCY5
Locus ID:	111
Components:	<p>KN222906G1, ADCY5 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CTTCTGCGCCGCGTAGCCCG</p> <p>KN222906G2, ADCY5 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CCCACGCAGAGCGGTGTTCCG</p> <p>KN222906D, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p>

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **GFP-puro in green**; **Right arm in violet**

```
GATCGTTGGG AACCGGAGCT GAATGAAGCC ATACCAAACG ACGAGCGTGA CACCACGATG CCTGTAGCAA
TGGCAACAAC GTTGCACAAA CTATTAACCTG GCGAACTACT TACTCTAGCT TCCCAGCAAC AATTAATAGA
CTGGATGGAG GCGGATAAAG TTGCAGGACC ACTTCTGCGC TCGGCCCTTC CGGCTGGCTG GTTTATTGCT
GATAAATCTG GAGCCGGTGA GCGTGGTTCT CGCGGTATCA TTGCAGCACT GGGGCCAGAT GGTAAGCCCT
CCCGTATCGT AGTTATCTAC ACGACGGGGA GTCAGGCAAC TATGGATGAA CGAAATAGAC AGATCGCTGA
GATAGGTGCC TCACTGATTA AGCATTGGTA ACTGTCAGAC CAAGTTTACT CATATATACT TTAGATTGAT
TTAAAACCTC ATTTTAAATT TAAAAGGATC TAGGTGAAGA TCCTTTTTGA TAATCTCATG ACCAAAATCC
CTTAACGTGA GTTTTCGTTC CACTGAGCGT CAGACCCCGT AGAAAAGATC AAAGGATCTT CTTGAGATCC
TTTTTTCTG CGCGTAATCT GCTGCTTGCA AACAAAAAAA CCACCGCTAC CAGCGGTGGT TTGTTTGCCG
GATCAAGAGC TACCAACTCT TTTTCCGAAG GTAAGTGGCT TCAGCAGAGC GCAGATACCA AATACTGTTC
TTCTAGTGTA GCCGTAGTTA GGCCACCACT TCAAGAAGTCT TGTAGCACCG CCTACATACC TCGCTCTGCT
AATCCTGTTA CCAGTGGCTG CTGCCAGTGG CGATAAGTCG TGTCTTACCG GGTGGACTC AAGACGATAG
TTACCGGATA AGGCGCAGCG GTCGGGCTGA ACGGGGGGTT CGTGACACACA GCCCAGCTTG GAGCGAACGA
CCTACACCGA ACTGAGATAC CTACAGCGTG AGCTATGAGA AAGCGCCACG CTTCCGGAAG GGAGAAAGGC
GGACAGGTAT CCGGTAAGCG GCAGGGTCCG AACAGGAGAG CGCACGAGGG AGCTTCCAGG GGGAAACGCC
TGGTATCTTT ATAGTCCTGT CGGGTTTCGC CACCTCTGAC TTGAGCGTCG ATTTTTGTGA TGCTCGTCAG
GGGGGCGGAG CCTATGGAAA AACGCCAGCA ACGCGGCCTT TTTACGGTTC CTGGCCTTTT GCTGGCCTTT
TGCTCACATG TTCTTTCCTG CGTTATCCCC TGATTCTGTG GATAACCGTA TTACCGCCTT TGAGTGAGCT
GATACCGCTC GCCGCAGCCG AACGACCGAG CGCAGCGAGT CAGTGAGCGA GGAAGCGGAA GAGCGCCCAA
TACGCAAACC GCCTCTCCCC GCGCGTTGGC CGATTTCATTA ATGCAGCTGG CACGACAGGT TTCCCAGCTG
GAAAGCGGGC AGTGAGCGCA ACGCAATTAA TGTGAGTTAG CTCACTCATT AGGCACCCCA GGCTTTACAC
TTTATGCTTC CGGCTCGTAT GTTGTGTGGA ATTGTGAGCG GATAACAATT TCACACAGGA AACAGCTATG
ACCATGATTA CGCCAAGCTC CTTCTCTTTC CAGCCCTTCC TCTTCTACTG ACTGACTGAC TGGAAGACAC
```



ACCTTCCAC CTCCCACCC CTCGTAAGAA AATAATGCTG GCTGGCGCCC GCACCTCCCA GTCGCTCCCA
 GTCGCTGCG AGGAAAGCGC ACCCGCAGTG TCTTTCGCC GGGACCCCG CCGAGCCGCC CTCGCCGCCG
 CCGAGCCCG AGAGCAGCTG GGCTCCGCTT AGGCGGAATC AGCGAGCGCC GCGCCCGGGC ACTGCCGGCC
 CGAGGAGGCA CCGCCCGCAA GGACACCACT CCGTCCCGTC TCGTCCGCAA CTCCGGCCCT CGTCGAGCTC
 GACGCGAGCC AGGATCCCGG ACGTCTCTCC GCGTGCGGCG CAGCAGCAGC CAGACCAGTC CCTGCGACCC
 CACCTCGGAG GCAACTCCAT TTCGGACCTG GGACTTCTGA CGCGGATCCT CAGTACTTC TCACCTCGGG
 GCTGTGCCCT CCTCTCCGC TCAGGACGGG GGTGCCAAGA TGCCCGCTG CAGCAAAATG CCCCAGGCCG
 CCCCCGAGT GTGACCCTAG CTGTGTCCCC CTGCTCGGCC GTCCGCCCTC CCCTTGAGAG CCCCAGGCC
 GGCTTCCGGG GGAGGAGGAA GGAGACGACG AGGCCGAGGG GGGGACTAGC ATGGAGAGCG ACGAGAGCGG
 CCTGCCGCC ATGGAGATCG AGTGCCGCAT CACCGGCACC CTGAACGGCG TGGAGTTCGA GCTGGTGGG
 GCGGAGAGG GCACCCCGA GCAGGGCCGC ATGACCAACA AGATGAAGAG CACCAAAGG GCCCTGACCT
 TCAGCCCTA CTGCTGAGC CACGTGATGG GCTACGGCTT CTACCACTTC GGCACCTACC CCAGCGGCTA
 CGAGAACCC TTCCTGCACG CCATCAACAA CGGCGGCTAC ACCAACACCC GCATCGAGAA GTACGAGGAC
 GGGCGGTGC TGCACGTGAG CTTGAGCTAC CGCTACGAGG CCGGCCGCGT GATCGGCGAC TTCAAGGTGA
 TGGGACCCG CTTCGCCGAG GACAGCGTGA TCTTACCGA CAAGATCATC CGCAGCAACG CCACCGTGGG
 GCACCTGCAC CCCATGGGCG ATAACGATCT GGATGGCAGC TTCACCCGCA CCTTCAGCCT GCGCGACGGC
 GGCTACTACA GCTCCGTGGT GGACAGCCAC ATGCACTTCA AGAGCGCCAT CCACCCAGC ATCCTGCAGA
 ACGGGGGCC CATGTTCCGC TTCGCCGCG TGGAGGAGGA TCACAGCAAC ACCGAGCTGG GCATCGTGGG
 GTACCAGCAC GCCTTCAAGA CCCCGGATGC AGATGCCGTT GAAGAAAGAG TTTAAGAATT CCGATCATAT
 TCAATAACCC TTAATATAAC TTCGTATAAT GTATGCTATA CGAAGTTATT AGGTCTGAAG AGGAGTTTAC
 GTCCAGCAA GCTTAGGATC TCGACCTCGA AATTCTACCG GGTAGGGGAG GCGCTTTTCC CAAGGCAGTC
 TGGAGCATGC GCTTAGCAG CCCCCTGGG CACTTGGCGC TACACAAGTG GCCTCTGGC TCGCACACAT
 TCCACATCCA CCGTAGGCG CCAACCGACT CGGTTCTTTG GTGGCCCTT CGCGCCACTT CTACTCTCTC
 CCCTAGTCAG GAAGTTCGCC CCGCCCCGC AGCTCGGTC GTGCAGGACG TGACAAATGG AAGTAGCACG
 TCTCACTAGT CTCGTGCAGA TGGACAGCAC CGCTGAGCAA TGGAAAGCGG TAGGCCTTTG GGGCAGCGG
 CAATAGCAGC TTTGCTCCTT CGCTTTCTGG GCTCAGAGG TGGGAAGGGG TGGTCCGGG GGGGGCTCA
 GGGGCGGGT CAGGGGCGGG GCGGGCGCCC GAAGTCTCTC CGGAGGCCCG GCATTCTGCA CGCTTCAAAA
 GCGCAGTCT GCCGCGCTGT TCTCTCTTC CTCATCTCCG GGCTTTTGA CCTGCATCCA TCTAGATCTC
 GAGCAGTGA AGCTTACCAT GACCGAGTAC AAGCCCACGG TGGCCTCGC CACCCGCGAC GACGTCCCA
 GGGCCGTACG CACCCTCGCC GCCGCTTCC CCGACTACC CGCCACGCG CACACCGTCG ATCCGGACCG
 CCACATCGAG CGGGTCACCG AGCTGCAAGA ACTCTTCTC ACGCGCGTCG GGCTCGACAT CGGCAAGGTG
 TGGTTCGGG ACGACGGCGC CGCGGTGGCG GTCTGGACCA CGCCGGAGAG CGTCGAAGCG GGGCGGTGT
 TCGCCGAGAT CGGCCGCGC ATGGCCGAGT TGAGCGGTTT CCGGCTGGCC GCGCAGCAAC AGATGGAAGG
 CCTCTGGCG CGCACCCGGC CCAAGGAGCC CGCGTGGTTC CTGGCCACC TCGGCGTCTC GCCCGACCAC
 CAGGGCAAGG GTCTGGGCG CGCCGTCGTG CTCCCGGAG TGGAGGCGGC CGAGCGCGCC GGGGTGCCCG
 CCTTCTGGA GACCTCCGCG CCCACAACC TCCCCTTCTA CGAGCGGCTC GGCTTACCAG TCACCGCCGA
 CGTCGAGGTG CCCGAAGGAC CGCGCACCTG GTGCATGACC CGCAAGCCCG GTGCCTGACG CCCGCCAC
 GACCCGACG GCCCGACCGA AAGGAGCGCA CGACCCATG CATCGATGAT ATCAGATCCC CGGGATGACG
 AAATTGATGA TCTATTAAC AATAAAGATG TCCACTAAA TGGAAATTTT TCCTGCATA CTTTGTAAAG
 AAGGGTGAGA ACAGAGTACC TACATTTTGA ATGGAAGGAT TGGAGTACG GGGGTGGGG TGGGTGGGA
 TTAGATAAAT GCCTGCTCTT TACTGAAGGC TCTTACTAT TGCTTTATGA TAATGTTTCA TAGTTGATA
 TCATAATTTA AACAAGCAA ACCAAATTAA GGGCCAGCTC ATTCCTCCA CTCATGATCT ATAGATCTAT
 AGATCTCTCG TGGATCATT GTTTTTCTCT TGATTCCAC TTTGTGGTTC TAAGTACTGT GGTTCACAAA
 TGTGTCAGTT TCATAGCCTG AAGAACGAGA TCAGCAGCCT CTGTTCCACA TACACTTCAT TCTCAGTATT
 GTTTTGCAA GTTCTAATTC CATCAGAAGC TGGTCGAGAT CCGGAACCCT TAATATAACT TCGTATAATG
 TATGCTATAC GAAGTTATTA GGTCCCTCGA AGAGTTTAC TAGGCGCGCC CTCTGCCCGG GGCTCCACCA
 AGAAACCCGG GGGGCGGTG ACCCCGACG AGCAGCAGCG CCTGGCCAGC CGCTGGCGCA GCGACGACGA
 CGACGATCCT CCGCTGAGCG GTGACGACCC CCTGGCCGGG GGCTTCGGCT TCAGTTCCTC CTCAAGTCC
 GCCTGGCAGG AGCGCGGCGG CGACGACTGC GGTGCGGCA GCCGCCGGA GCGGCGGGG GCGGCCAGCG
 GGGGACGAC CCGGCGGCC CCTGCGGGCG GCGGCGGCG CTCGGCGCG GCGGCTGCTC CGGCGGGCGG
 GACGGAGGTG CGCCCTCGCT CGGTGGAGGT GGGTCTGGAG GAGCGGCGG GCAAGGGGCG CGCGGCCGAC
 GAGCTGGAGG CCGGCGCCGT CGAGGGCGGC GAGGGTCCG GGGATGGCG CAGCTCGGCG GACTCGGGCT

CGGGCGCGGG GCCCGGCGCG GTGCTGTCCC TGGGCGCCTG CTGCCTGGCG TTGCTGCAGA TATTCGCTC
 CAAGAAGTTC CCGTCGGACA AACTGGAGCG GCTGTACCAG CGCTACTTCT TCCGCCTGAA CCAGAGCAGC
 CTCACCATGC TCATGGCCGT TCCACAGTCT TCACTGACTG ACTGACTGGA AAGTCCTCTC CACTGACTGT
 AGCCTCCAAT TCACTGGCCG TCGTTTTACA ACGTCGTGAC TGGGAAAACC CTGGCGTTAC CCAACTTAAT
 CGCCTTGACAG CACATCCCC TTTCCGCCAGC TGGCGTAATA GCGAAGAGGC CCGCACCGAT CGCCCTTCCC
 AACAGTTGCG CAGCCTGAAT GCGGAATGGC GCCTGATGCG GTATTTTCTC CTTACGCATC TGTGCGGTAT
 TTCACACCGC ATACGTCAA GCAACCATAG TACGCGCCCT GTAGCGGCGC ATTAAGCGCG GCGGGTGTGG
 TGGTTACGCG CAGCGTGACC GCTACACTTG CCAGCGCCCT AGCGCCCGCT CCTTTCGCTT TCTTCCCTTC
 CTTTCTCGCC ACGTTCGCG GCTTTCGCCG TCAAGCTCTA AATCGGGGGC TCCCTTTAGG GTTCCGATTT
 AGTGCTTTAC GGCACCTCGA CCCCAGAAAAA CTTGATTTGG GTGATGGTTC ACGTAGTGGG CCATCGCCCT
 GATAGACGGT TTTTCGCCCT TTGACGTTGG AGTCCACGTT CTTAATAGT GGACTCTTGT TCCAACTGG
 AACAACTC AACCTATCT CGGGCTATTC TTTTGATTTA TAAGGGATTT TGCCGATTTT GGCCTATTGG
 TTAATAATG AGCTGATTTA ACAAATTT AACCGAATT TTAACAAAT ATTAACGTTT ACAATTTTAT
 GGTGCACTCT CAGTACAATC TGCTCTGATG CCGCATAGTT AAGCCAGCCC CGACACCCGC CAACACCCGC
 TGACGCGCCC TGACGGGCTT GTCTGCTCCC GGCATCCGCT TACAGACAAG CTGTGACCGT CAACGGGAGC
 TGCATGTGTC AGAGTTTTT ACCGTCATCA CCGAAACGCG CGACCCGAAA GGGCCTCGTG ATACGCCTAT
 TTTTATAGGT TAATGTCATG ATAATAATGG TTTCTTAGAC GTCAGGTGGC ACTTTTCGGG GAAATGTGCG
 CGGAACCCCT ATTTGTTTAT TTTTCTAAT ACATTCAAT ATGTATCCGC TCATGAGACA ATAACCCTGA
 TAAATGCTTC AATAATATTG AAAAAGGAAG AGTATGAGTA TTCAACATTT CCGTGTGCGC CTTATTCCCT
 TTTTTCGGC ATTTTGCCTT CCTGTTTTTG CTCACCCAGA AACGCTGGTG AAAGTAAAG ATGCTGAAGA
 TCAGTTGGGT GCACGAGTGG GTTACATCGA ACTGGATCTC AACAGCGGTA AGATCCTTGA GAGTTTTTCG
 CCCGAAGAAC GTTTTCCAAT GATGAGCACT TTTAAAGTTC TGCTATGTGG CGCGGTATTA TCCCCTATTG
 ACGCCGGGCA AGAGCAACT GGTCGCCGCA TACACTATTC TCAGAATGAC TTGGTTGAGT ACTCACCAGT
 CACAGAAAAG CATCTTACGG ATGGCATGAC AGTAAGAGAA TTATGCAGTG CTGCCATAAC CATGAGTGAT
 AACACTGCGG CCAACTTACT TCTGACAACG ATCGGAGGAC CGAAGGAGCT AACCGCTTTT TTGCACAACA
 TGGGGGATCA TGTAACCTCG CTT

GE100003, scramble sequence in pCas-Guide vector

Disclaimer:

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

RefSeq:

[NM_001199642](#), [NM_183357](#)

UniProt ID:

[O95622](#)

Synonyms:

AC5; FDFM

Summary:

This gene encodes a member of the membrane-bound adenylyl cyclase enzymes. Adenylyl cyclases mediate G protein-coupled receptor signaling through the synthesis of the second messenger cAMP. Activity of the encoded protein is stimulated by the Gs alpha subunit of G protein-coupled receptors and is inhibited by protein kinase A, calcium and Gi alpha subunits. Single nucleotide polymorphisms in this gene may be associated with low birth weight and type 2 diabetes. Alternatively spliced transcript variants that encode different isoforms have been observed for this gene. [provided by RefSeq, Dec 2010]

Product images:

