

Product datasheet for **RG207213**

ALDH5A1 (NM_001080) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH5A1 (NM_001080) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALDH5A1
Synonyms:	SSADH; SSDH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG207213 representing NM_001080
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGACCTGCATTTGGCTGCGGAGCTGTGGGGCCCGCGCCTCGGGTGCAGCTTTCAGGCTGCCGCC
 TCCGCCCCCGCGCGCGCCGCTGGTCCCTGCCTCCGGCCCTGCGCCCGCCCGGCCAGCTCCGCTGCTA
 CGCTGGGCGCCTGGCGGGCCTCTCTGCGCGCTGCTGCGCACCGACAGCTTCGTGGGCGGCCGCTGGCTC
 CCGGCCGCGCCACCTTCCCGTGAAGACCCGGCCAGCGGCGCCGCTCTGGGCATGGTAGCCGACTGCG
 GGGTGCAGAGAGGCCCGCGCCGCTGCGCGCTGCCTACGAGGCTTTCGCCGCTGGAGGGAGGTCTCCGC
 CAAGGAGAGGAGTTCATTACTTCGGAAGTGGTACAATTTAATGATACAAAATAAGGATGACCTTGCCAGA
 ATAATCACAGCTGAAAGTGAAAGCCACTGAAGGAGGCACATGGAGAAATTCCTATTCCGCTTTTTCC
 TAGAGTGGTTCTCTGAGGAAGCCCGCGTGTACGGAGACATTACACACCCCGCAAAGGACAGGCC
 GGCCTGGTCTCAAGCAGCCATAGGCGTGGCTGCAGTCATCACCCGTGGAATTTCCCAGTGCCATG
 ATCACCCGGAAGGTGGGGCCCGCCTGGCAGCCGCTGTACTGTCTGGTGAAGCCTGCCAAGACACGC
 CCTTCTCCGCCCTGGCCCTGGCTGAGCTTGCAAGCCAGGCTGGGATTCTTCAGGTGATACAATGTTAT
 TCCTGTCTCGAAAGAATGCCAAGGAAGTAGGGGAGGCAATTTGTACTGATCCTCTGGTGTCCAAAATT
 TCCTTTACTGGTTCACAACTACAGGAAAGATCCTGTTGCACCACGCAGCAAACCTCTGTGAAAAGGCTC
 CTATGGAGCTGGGCGCCTTGTCTCATTATAGTATTTGACAGTGCCAACGTGGACCAGGCTGTAGCAGG
 GGCCATGGCATCTAAATTTAGGAACACTGGACAGACTTGTGTTGCTCAAACCAATTCCTGGTCAAAGG
 GGCATCCATGATGCCTTTGTAAGCATTCGCCGAGCCATGAAGAAGAACCTGCGCGTAGGTAATGGAT
 TTGAGGAAGAACTACTCAGGCCCATTAATTAATGAAAAGCGGTAGAAAAGGTGAGAAAACAGGTGAA
 TGATGCCGTTTCTAAAGGTGCCACCGTTGTGACAGGTGGAAAACGACACCAACTTGGAAAAAATTTCTTT
 GAGCCTACCCTGCTGTGCAATGTCACCCAGGACATGCTGTGCACTCATGAAGAGACTTTCGGCCCTCTGG
 CACCAGTTATCAAGTTCGATACAGAGGAGGAGGCTATAGCAATCGCTAACGCAGCTGATGTTGGGTAGC
 AGGTTATTTTTACTCTCAAGACCCAGCCAGATCTGGAGAGTGGCAGAGCAGCTGGAAGTGGGCATGGT
 GCGCTCAACGAAGGATTAATTTCTCTGTGGAGTGCCTTTTGGTGGAGTGAAGCAGTCCGGCCTTGGGC
 GAGAGGGTCCAAGTATGGCATTGATGAGTATCTGGAACCAAGTATGTGTGTTACGGGGCTTG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG207213 representing NM_001080
 Red=Cloning site Green=Tags(s)

MATCIWLRSCGARRLGSTFPGCRLRPRAGGLVPASGPAPGPAQLRCYAGRLAGLSAALLRDTSFVGGRWL
 PAAATFPVQDPASGAALGMVADCGVREARAARAAVEAFCRWREVSARKERSLLRKWYNLMIQNKDDLAR
 IITAESGKPLKEAHGEILYSAFFLEWFSEEARRVYGDIIHTPAKDRRALVLKQPIGVAAVITPWNFPSAM
 ITRKVGAAALAGCTVVVKPAEDTPFSALALAEASQAGIPSGVYVNIPCSRRKNAKEVGEICTDPLVSKI
 SFTGSTTTGKILLHHAANSVKRVSMELGGLAPFIVFDSANVDQAVAGAMASKFRNTGQTCVCSNQFLVQR
 GIHDAFVKAFAMKKNLRVGNFGFEEGTQGPLINEKAVEKVEKQVNDVSKGATVVTGGKRHLGKNFF
 EPTLLCNVTQDMLCTHEETFGLAPVIKFDTEEEAIAIANAADVLAGYFYSQDPAQIWRVAEQLEVMV
 GVNEGLISSVECPFGVQKQSLGREGSKYGIDEYLELKYVCYGG

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001080

ORF Size: 1605 bp

OTI Disclaimer: 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_001080.3](#), [NP_001071.1](#)

RefSeq Size: 5131 bp

RefSeq ORF: 1608 bp

Locus ID: 7915

UniProt ID: [P51649](#)

Cytogenetics: 6p22.3

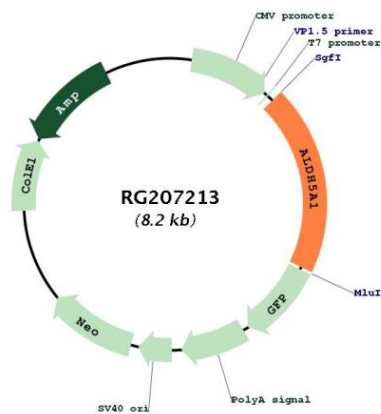
Domains: aldedh

Protein Families: Druggable Genome

Protein Pathways: Alanine, aspartate and glutamate metabolism, Butanoate metabolism, Metabolic pathways

Gene Summary: This protein belongs to the aldehyde dehydrogenase family of proteins. This gene encodes a mitochondrial NAD(+)-dependent succinic semialdehyde dehydrogenase. A deficiency of this enzyme, known as 4-hydroxybutyricaciduria, is a rare inborn error in the metabolism of the neurotransmitter 4-aminobutyric acid (GABA). In response to the defect, physiologic fluids from patients accumulate GHB, a compound with numerous neuromodulatory properties. Two transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG207213