

Product datasheet for **MG208569**

Aldh6a1 (NM_134042) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aldh6a1 (NM_134042) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Aldh6a1
Synonyms:	1110038I05Rik; Mmsd; Mmsdh
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG208569 representing NM_134042
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGGGCAGTGGCGCAGCGCAGCAATGCGGTCCCGGATCCTGCAGGTTTCTTCTAAGGTAATG
 CCACATGGTATCCAGCATCCTCCTTCTCTTCTCATCAGTGCCAAGTGTAAAGCTTTCATTGATGGAAA
 ATTTGTTGAATCAAAAAGTGATAAATGGATTGACATCCACAACCCAGCCCAATGAAGTTGTTGGTAGG
 GTTCTCAGTCCACAAAGCTGAGATGGACGACGCGTTGAGTCTGCAAACGTGCTTCCCTGCGTGGG
 CAGACACATCTATTTAAGCCGGCAGCAGGTCCTGCTTGTATCAGCAGCTCATTAAAGAAAACCTGAA
 AGAAATTGCCAGGTTAATCACACTGGAACAAGGGAAGACTCTTGCTGATGCTGAAGGAGATGATTCCGA
 TGCCTTCAGTGGTTGAGCATGCCTGTAGTGTGACATCCCTCATGCTGGGAGAGACCATGCCATCTATCA
 CAAAGACATGGACCTTTATTCTACCGTCTGCCTCTGGGGTGTGTGCAGGCATTGCACATTTAATTT
 TCCTGCCATGATCCCCCTTTGGATGTTTCCCATGGCTATGGTTTGTGAAATACTTCTCTAATGAAACCA
 TCAGAGCGAGTACCTGGAGCAACTATGCTCCTTGCTAAGTTGCTTCAGGATTCGGGGCCCTGACGGAA
 CACTGAACATTATCCATGGACAACATGATGCTGTAACCTTTATTTGCGATCATCCAGACATCAAGGCAAT
 CAGCTTTGTGGGATCCAACCAGGCAGGAGATACATCTTCGAAAGAGGATCAAGAAATGGCAAGAGGGTT
 CAAGCCAATATGGGAGCCAAAACCATGGAGTAGTCATGCCAGACGCCAATAAGGAAAATACCCTCAACC
 AGCTGGTCGGGGCAGCATTCCGAGCTGCTGGGCAGCGTGCATGGCTCTTTCAACAGCCATCCTCGTAGG
 GGAGGCTAAGAAGTGGCTGCCAGAACTGGTCGATCGGGCCAAAATCTGCGAGTCAATGCAGGAGACCAG
 CCTGGAGCTGATCTTGGCCCCCTGATCACCCCCAGGCCAAAAGAGAGAGTCTGCAATCTGATCGATAGCC
 GAACAAAAGAGGGAGCTTCCATCTTCTGGATGGCGAAGAATTAAGTCAAGGGCTATGAAAATGGTAA
 CTTTGTGGACCAACCATCATCTCAAATGTTAAGCCAAGTATGACTTGTACAAAGAGGAGATATTTGGT
 CCAGTCTTGTGGTTTTGGAGACAGAAACTGGATGAAGCAATCAAGATTGTAATGACAACCCATATG
 GAAATGGAATGCCATCTTACCACCAATGGAGCCACCGCCGAAAATGCTCACATGGTGGATGTGGG
 ACAGGTGGGTGTGAATGTCCCCATTCCAGTGCCTTTGCCGATGTTTTCTTACCAGGCTCTCGCTTTCC
 TTCAGGGGAGACCAATTTCTATGGCAAACAGGGCATCCAGTTTTACACGCAGTTAAAGACTATCACGT
 CTCAGTGGAAAGAAGAAGATGCTACGCTTCTCCCCTGCTGTAGTCATGCCTACCATGGGGCGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG208569 representing NM_134042
 Red=Cloning site Green=Tags(s)

MAAAVAAAAAMRSRILQVSSKVNATWYPASSFSSSSVPTVKLFIDGKFVESKSDKWIDIHNPATNEVVGR
 VPQSTKAEMDAAVESCKRAFPWADTSILSRQQVLLRYQQLIKENLKEIARLITLEQGKTLADAEGDVFR
 CLQVVEHACSVTSLMLGETMPSITKMDLYSYRLPLGVCAGIAPFNFPAMIPLWMFPMAMVCGNTFLMKP
 SERVPGATMLLAKLLQDSGAPDGLNIIHGQHDAVNFICDHPDIKAI SFVGSNQAGEYIFERGSRNKRV
 QANMGAKNHGVVMPDANKENTLNQLVGAAGQRCMALSTAILVGEAKKWLPELVDRAKNLRVAGDQ
 PGADLGPLITPQAKERVCNLIDSGTKEGASILLDGRRIKVKGYENGNFVGPTIISNVKPSMTCYKEEIFG
 PVLVVLETETLDEAIKIVNDNPYNGTAIFTTNGATARKYAHMVDVGQVGNVPIPVPLPMFSFTGSRSS
 FRGDTNFYKGQIQFYTLKTTISQWKEEDATLSSPAVVMPTMGR

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_134042

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_134042.2](#), [NP_598803.1](#)

RefSeq Size: 3346 bp

RefSeq ORF: 1608 bp

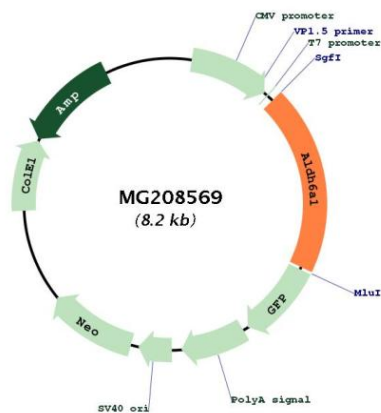
Locus ID: 104776

UniProt ID: [Q9EQ20](#)

Cytogenetics: 12 39.21 cM

Gene Summary: This gene encodes a member of the aldehyde dehydrogenase protein family. The encoded enzyme is a mitochondrial methylmalonate semialdehyde dehydrogenase that plays a role in the valine and pyrimidine catabolic pathways. This enzyme catalyzes the irreversible oxidative decarboxylation of malonate and methylmalonate semialdehydes to acetyl- and propionyl-CoA. Mutations in the human gene result in Methylmalonate Semialdehyde Dehydrogenase Deficiency, characterized by elevated beta-alanine, 3-hydroxypropionic acid, and both isomers of 3-amino and 3-hydroxyisobutyric acids in urine organic acids. Alternate splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Sep 2015]

Product images:



Circular map for MG208569