

## Product datasheet for **MR208569**

### **Aldh6a1 (NM\_134042) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Aldh6a1 (NM_134042) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aldh6a1
Synonyms:	1110038I05Rik; Mmsd; Mmsdh
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR208569 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCGCGGCAGTGGCGCAGCGCAGCAATGCGGTCCCGGATCCTGCAGGTTTCTTCTAAGGTAATG  
 CCACATGGTATCCAGCATCCTCCTTCTCTTCTCATCAGTGCCAAGTGTAAAGCTTTCATTGATGGAAA  
 ATTTGTTGAATCAAAAAGTGATAAATGGATTGACATCCACAACCCAGCCCAATGAAGTTGTTGGTAGG  
 GTTCTCAGTCCACAAAGCTGAGATGGACGCAGCCGTTGAGTCTGCAAACGTGCTTCCCTGCGTGGG  
 CAGACACATCTATTTAAGCCGGCAGCAGGTCCTGCTTTCGTTATCAGCAGCTCATTAAAGAAAACCTGAA  
 AGAAATTGCCAGGTTAATCACACTGGAACAAGGGAAGACTCTTGCTGATGCTGAAGGAGATGATTCCGA  
 TGCCTTCAGTGGTTGAGCATGCCTGTAGTGTGACATCCCTCATGCTGGGAGAGACCATGCCATCTATCA  
 CAAAGACATGGACCTTTATTCTACCGTCTGCCTCTGGGGTGTGTGCAGGCATTGCACCATTTAATTT  
 TCCTGCCATGATCCCCCTTTGGATGTTTCCCATGGCTATGGTTTGTGAAATACTTTCCTAATGAAACCA  
 TCAGAGCGAGTACCTGGAGCAACTATGCTCCTTGCTAAGTTGCTTCAGGATTCGGGGCCCTGACGGAA  
 CACTGAACATTATCCATGGACAACATGATGCTGTAACCTTTATTTGCGATCATCCAGACATCAAGGCAAT  
 CAGCTTTGTGGGATCCAACAGGCAGGAGAGTACATCTTCGAAAGAGGATCAAGAAATGGCAAGAGGGTT  
 CAAGCCAATATGGGAGCCAAAACCATGGAGTAGTCATGCCAGACGCCAATAAGGAAAATACCCTCAACC  
 AGCTGGTCGGGGCAGCATTCCGGAGCTGCTGGGCAGCGTGCATGGCTCTTTCAACAGCCATCCTCGTAGG  
 GGAGGCTAAGAAGTGGCTGCCAGAACTGGTCGATCGGGCCAAAATCTGCGAGTCAATGCAGGAGACCAG  
 CCTGGAGCTGATCTTGGCCCCCTGATCACCCCCAGGCCAAAGAGAGAGTCTGCAATCTGATCGATAGCC  
 GAACAAAAGAGGGAGCTTCCATCCTTCTGGATGGCGAAGAATTAAGTCAAGGGCTATGAAAATGGTAA  
 CTTTGTGGACCAACCATCATCTCAAATGTTAAGCCAAGTATGACTTGTACAAAGAGGAGATATTTGGT  
 CCAGTCTTGTGGTTTTGGAGACAGAAACTGGATGAAGCAATCAAGATTGTAATGACAACCCATATG  
 GAAATGGAAGTGCATCTTACCACCAATGGAGCCACCGCCGAAATATGCTCACATGGTGGATGTGGG  
 ACAGGTGGGTGTGAATGTCCCCATTCCAGTGCCTTTGCCGATGTTTTCTTACCAGGCTCTCGCTTTCC  
 TTCAGGGGAGACCAATTTCTATGGCAAACAGGGCATCCAGTTTTACACGCAGTAAAGACTATCACGT  
 CTCAGTGGAAAGAAGAAGATGCTACGCTTTCCTCCCCTGCTGTAGTCATGCCTACCATGGGGCGT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR208569 protein sequence  
 Red=Cloning site Green=Tags(s)

MAAAVAAAAAMRSRILQVSSKVNATWYPASSFSSSSVPTVKLFIDGKFVESKSDKWIDIHNPATNEVVGR  
 VPQSTKAEMDAAVESCKRAFPWADTSILSRQQVLLRYQLIKENLKEIARLITLEQGKTLADAEGDVFR  
 CLQVVEHACSVTSLMLGETMPSITKMDLYSYRLPLGVCAGIAPFNFPAMIPLWMFPMAMVCGNTFLMKP  
 SERVPGATMLLAKLLQDSGAPDGLNIIHGQHDAYNFICDHPDIKAISFVGSNQAGEYIFERGSRNKRV  
 QANMGAKNHGVMPDANKENTLNQLVGAAGQRCMALSTAILVGEAKKWLPELVDRAKNLRVNAAGDQ  
 PGADLGPLITPQAKERVCNLIDSGTKEGASILLDGRIKVKGYENGNFVGPTIISNVKPSMTCYKEEIFG  
 PVLVVLETETLDEAIKIVNDNPYNGTAIFTTNGATARKYAHMVDVGVGVNVPVPLPMFSFTGSRSS  
 FRGDTNFYGKQGIQFYTLKTIITSQWKEEDATLSSPAVVMPTMGR

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_134042

**ORF Size:** 1608 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\\_134042.1](#), [NM\\_134042.2](#), [NM\\_134042.3](#), [NP\\_598803.1](#)

**RefSeq Size:** 3346 bp

**RefSeq ORF:** 1608 bp

**Locus ID:** 104776

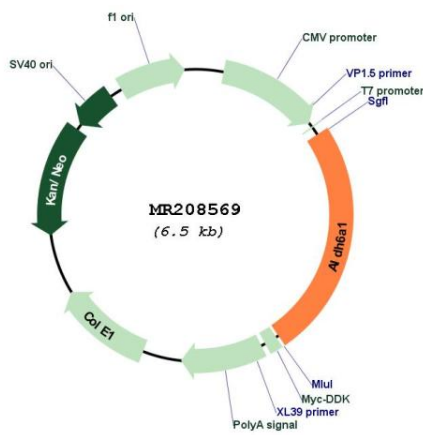
**UniProt ID:** [Q9EQ20](#)

**Cytogenetics:** 12 39.21 cM

**MW:** 58 kDa

**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 MR208569