

## Product datasheet for **MC215918**

### **Aldh3a1 (NM\_007436) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Aldh3a1 (NM_007436) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Aldh3a1
Synonyms:	Ahd-4; Ahd4; Aldh; Aldh3
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC215918 representing NM\_007436  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGCAATATCAGTAGCATCGTGAACCGGCCGTGATGCCTTTAACTCAGGCAAGACTCGACCGCTGC  
 AGTTCCGGTTGAGCAGCTGGAGGCGTTGCAGCGCATGATCAACGAGAATTGAAAGGCATCTCCAAGGC  
 GCTGGCCTCTAACCTGCGCAAGAATGAATGGACCTCTACTACGAGGAGGTGGCTCACGTCTGGACGAA  
 ATCGATTTACGATTAAGGGGCTCTCCGATTGGGCTGAGGACGAGCCTGTGGCAAAGACTCGTCAGACCC  
 AGGAAGATGACCTCTACATCCACTCGGAGCCCCTGGGCGTGGTCTTGTATAGGTGCTTGGAACTACCC  
 ATTCAACCTCACCATTACGCCATGGTGGGTGCCATCGCTGCAGGAAATGCTGTGGTCTCAAGCCCTCG  
 GAAGTGAGTGATCACATGGCAGACCTGCTTCAACTTATCCCTCAGTATATGGACAAGGATCTGTACC  
 CAGTGATCAAAGGGGTGTCCTGAAACCAGGAGCTGCTCAAAGAGAAGTTTGACCACATCATGTACAC  
 AGGGAGCACGGCTGTAGGAAAGATCGTATGGCGGCTGCCGCAAGCATCTGACCCTGTCACCTTGGAG  
 CTTGGAGGAAAGACCCCTTGTACGTAGACAAGGACTGTGATCTAGATGTGGCTTGCCGGGTATTGCTT  
 GGGGAAAGTTTATGAACAGTGGCCAGACCTGTGTGGCCCCAGACTACATCCTCTGTGACCCCTCCATTCA  
 GAATGAAATTGTGGAGAAGCTCAAAAAGTCACTGAAAGATTTCTATGGGGAAGATGCTAAGCAGTCCCAT  
 GACTATGGGAGGATCATCAACGACCGGCACTTCCAGCGGGTCATAAATCTGATTGACAGCAAGAAAGTAG  
 CCCATGGAGGCACCTGGGATCAGCCTTACGATACATAGCTCCCACCATCCTAGTGGATGTGGACCCCA  
 GTCCCCGGTGTGAGGAGGAGATCTTTGGCCGGTGTGCCATTGTGTGTGTTCAAGCTTGGATGAG  
 GCCATTAATTTATCAACCAGCGGAGAGCCCTGGCACTCTATGTGTTCTCCAACAATGACAAGGTGA  
 TCAAGAAAATGATCGCAGAGACATCAAGCGGTGGAGTGACAGCCAATGACGTCATTGTTACATCACTGT  
 GCCCACTTTGCCCTTTGGGGGTGTGGGAACAGCGGCATGGGGGCTACCATGGCAAGAAAAGCTTCGAG  
 ACCTTTTCCCACCGCCTCTTGCCTGGTGGTCTCTGCGGAATGAAGAAGCTAACAAAGCCAGGTATC  
 CCCAAGCCAGCAAGATGCCCGGCAT**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

**ACCN:** NM\_007436

**Insert Size:** 1362 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](mailto: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\\_007436.2](#), [NP\\_031462.2](#)

**RefSeq Size:** 1729 bp

**RefSeq ORF:** 1362 bp

**Locus ID:** 11670

**UniProt ID:** [P47739](#)

**Cytogenetics:** 11 37.96 cM

**Gene Summary:** ALDHs play a major role in the detoxification of alcohol-derived acetaldehyde (Probable). They are involved in the metabolism of corticosteroids, biogenic amines, neurotransmitters, and lipid peroxidation (Probable). Oxidizes medium and long chain aldehydes into non-toxic fatty acids (PubMed:25286108). Preferentially oxidizes aromatic aldehyde substrates (PubMed:11784860). Comprises about 50 percent of corneal epithelial soluble proteins (PubMed:11784860). May play a role in preventing corneal damage caused by ultraviolet light (PubMed:10376761).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) uses an alternate in-frame splice site in the 3' coding region compared to variant 3. The encoded isoform (1) is shorter than isoform 2. Both variants 1 and 2 encode the same isoform (2).