

Product datasheet for **MR216262**

Aldh3a1 (NM_007436) Mouse Tagged ORF Clone

Product data:

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



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ORF Nucleotide Sequence:

>MR216262 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAGCAATATCAGTAGCATCGTGAACCGGCCCGTGATGCCTTTAACTCAGCAAGACTCGACCGCTGC
 AGTTCCGGGTTGAGCAGCTGGAGGCGTTGACGCGCATGATCAACGAGAAGTTGAAAGGCATCTCCAAGGC
 GCTGGCCTCTAACCTGCGCAAGAATGAATGGACCTCCTACTACGAGGAGGTGGCTCACGTCTGGACGAA
 ATCGATTTACGATTAAGGGGCTCTCCGATTGGGCTGAGGACGAGCCTGTGGCAAAGACTCGTCAGACCC
 AGGAAGATGACCTCTACATCCACTCGGAGCCCCTGGGCGTGGTCTTGTATAGGTGCTTGGAACTACCC
 ATTCAACCTCACCATTACGCCATGGTGGGTGCCATCGCTGCAGGAAATGCTGTGGTCTCAAGCCCTCG
 GAAGTGAGTGATCACATGGCAGACCTGCTTCAACACTTATCCCTCAGTATATGGACAAGGATCTGTACC
 CAGTGATCAAAGGGGGTGTCCCTGAAACCACGGAGCTGCTCAAAGAGAAGTTTGACCACATCATGTACAC
 AGGGAGCACGGCTGTAGGAAAGATCGTCATGGCGGCTGCCGCAAGCATCTGACCCTGTACCTTGGAG
 CTTGGAGGAAAGACCCCTTGTACGTAGACAAGGACTGTGATCTAGATGTGGCTTGCCGGCGTATTGCTT
 GGGGAAAGTTTATGAACAGTGGCCAGACCTGTGTGGCCCCAGACTACATCCTCTGTGACCCCTCCATTCA
 GAATGAAATTGTGGAGAAGCTCAAAAAGTCACTGAAAGATTTCTATGGGGAAGATGCTAAGCAGTCCCAT
 GACTATGGGAGGATCATCAACGACCGGCACTTCCAGCGGGTCATAAATCTGATTGACAGCAAGAAAGTAG
 CCCATGGAGGCACCTGGGATCAGCCTTACGATACATAGCTCCACCATCCTAGTGGATGTGGACCCCCA
 GTCCCCGGTGATGCAGGAGGAGATCTTTGGCCGGTGATGCCATTGTGTGTGTTCAAGCTTGGATGAG
 GCCATTAATTTATCAACCAGCGGAGAGACATCAAGCGGTGGAGTGACAGCCAATGACGTCATTGTTACATCACTGT
 TCAAGAAAATGATCGCAGAGACATCAAGCGGTGGAGTGACAGCCAATGACGTCATTGTTACATCACTGT
 GCCACTTTGCCCTTTGGGGGTGTGGGAAACAGCGGCATGGGGGCCTACCATGGCAAGAAAAGCTTCGAG
 ACCTTTTCCACCGCGCTCTTGCTGGTGGGTCTCTGCGGAATGAAGAAGCTAACAAAGCCAGGTATC
 CCCAAGCCAGCCAAGATGCCCGGCAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR216262 protein sequence
 Red=Cloning site Green=Tags(s)

MSNISSIVNRARDAFNSGKTRPLQFRVEQLEALQRMINENLKGISKALASNLKNEWTSYEEVAHVLDE
 IDFTIKGLSDWAEDEPVAKTRQTQEDDLYIHSEPLGVVLVIGAWNYPFNLTIQPMVGAIAAGNAVVLKPS
 EVSDHMADLLSTLIPQYMDKDLYPVIKGGVPETTELLKEKFDHIMYTGSTAVGKIVMAAAKHLTPVTLE
 LGGKSPCYVDKCDLDVACRRIAWGKFMNSGQTCVAPDYILCDPSIQNEIVEKLLKSLKDFYGEDAKQSH
 DYGRINDRHFQRVINLIDSKKVAHGTTWDQPSRYIAPTILVDVDPQSPVMQEEIFGPVMPIVCVRSLDE
 AIKFINQREKPLALYVFSNNDKVIKKMIAETSSGGVTANDVIVHITVPTLPFGGVNSGMGAYHGKKSFE
 TFSHRRSCLVRSRNEEANKARYPPSPAKMPRH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_007436

ORF Size: 1359 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 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](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

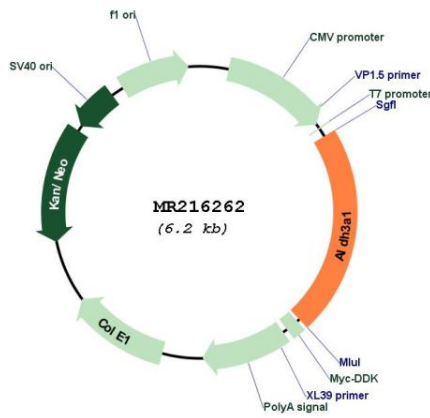
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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_007436.2, NP_031462.2](#)
RefSeq Size: 1729 bp
RefSeq ORF: 1362 bp
Locus ID: 11670
UniProt ID: [P47739](#)
Cytogenetics: 11 37.96 cM
MW: 50.5 kDa

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]

Product images:



Circular map for MR216262