

Product datasheet for **MC217305**

Aldh1a3 (NM_053080) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aldh1a3 (NM_053080) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Aldh1a3
Synonyms:	ALDH6; RALDH3; V1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC217305 representing NM_053080
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCTACCACCAACGGGCTGTGGAAACGGACAGCCGGATGGGAAACCGCCTGCCTTGCCGCGCCCA
 TCCGCAACTTGGAGGTCAAGTTCACCAAGATATTTATCAACAACGACTGGCAGCAATCCAAGAGTGGAA
 AAAGTTTGCCACATATAACCTTCAACACTAGAGAAAATATGTGAGGTGGAGAAGGAGATAAGCCCGAT
 GTGGACAAGGCTGTGGAGGCGCTCAAGCTGCCTTCCAGCGGGGATCCCCGTGGCGCCGGCTGGATGCAC
 TGAGCAGAGGCCAGTTGCTGCATCAGCTGGCTGACCTTGTAGAAAGGGACCGAGCGATCTGGCTACTCT
 GGAGACCATGGACACCGCAAGCCATTCCTTCATGCCTTTTTCGTCGACCTGGAAGGCTGTATTAAGACC
 TTCAGATATTTTCCGGGTGGGAGACAAAATCCAGGGCAGGACCATCCCCACAGATGACAACGTTGTGT
 GCTTACCAGGCATGAGCCCATCGGGTGTGTGGGGCCATTACACCATGGAACCTCCCCCTGCTGATGCT
 GGCTGGAAACTGGCTCCTGCCCTGTGCTGTGGGAACACCGTGGTCTGAAGCCAGCTGAGCAGACCCCT
 CTACGGCTCTGTACCTAGCCTCTCTCATCAAAGAGGTGGGTTCCCTCCGGGTGTGGTGAACATTTGAC
 CAGGCTTTGGGCCCACTGTGGGAGCAGCAATTTCTCCCATCCGAGATCAACAAGATAGCCTTACCCGG
 CTCCACAGAGGTTGGAAAGCTGGTCAGAGAAGCCGCTCCCGGAGCAACCTGAAGAGGGTACACTGGAG
 CTAGGAGGCAAGAACCCGTGCATCGTGTGTGCAGATGCTGACTTGGACTTGGCCGTGAGTGTGCTCACC
 AGGGAGTGTCTTCAACCAAGGCCAGTGTGTACAGCGGCCTCCAGGGTGTTCGTGGAAGAGCAGGTCTA
 CGGGGAGTTTGTGAGGAGGAGTGTGGAGTTCGCCAAGAAGAGGCCAGTTGGAGACCCCTTCGATGCCAAA
 ACGGAGCAGGGCCCTCAGATCGACAAAAGCAGTTTGACAAAATCCTCGAGCTGATTGAGAGTGGGAAGA
 AGGAAGGGGCAAGCTAGAATGTGGGGGTCAGCCATGGAGGACAGAGGGCTGTTTCATCAAACCCACGGT
 CTTCTCAGATGTTACGGACAACATGAGGATTGCCAAGAGGAGATTTTCGGACCAGTGCAGCCGATCCTG
 AAGTTCAAAAACCTGGAGGAGGTGATCAAGAGAGCGAATAGCACCGACTATGGACTCACAGCAGCAGTGT
 TCACAAAAACCTGGACAAAGCACTGAAGCTGGCTGCTGCGCTCGAGTCGGGGACAGTCTGGATCAACTG
 CTACAATGCATTTTATGCACAGGCTCCATTTGGTGGCTTCAAAATGTCTGGGAATGGCAGAGAAGTAGGA
 GAATATGCTCTGGCTGAATATACAGAAGTAAAACCTGTCACCATCAAACCTCGAGGAGAAGAACCCTGA

ACGGCTACGGCGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Chromatograms: https://cdn.origene.com/chromatograms/ja1906_f05.zip

Restriction Sites: SgfI-MluI

ACCN: NM_053080

Insert Size: 1539 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](#)

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_053080.3](#), [NP_444310.3](#)

RefSeq Size: 3423 bp

RefSeq ORF: 1539 bp

Locus ID: 56847

UniProt ID: [Q9JHW9](#)

Cytogenetics: 7 C

Gene Summary: NAD-dependent aldehyde dehydrogenase that catalyzes the formation of retinoic acid (PubMed:11044606, PubMed:11013254, PubMed:14623956). Has high activity with all-trans retinal, and has much lower in vitro activity with acetaldehyde (By similarity). Required for the biosynthesis of normal levels of retinoic acid in the embryonic ocular and nasal regions; retinoic acid is required for normal embryonic development of the eye and the nasal region (PubMed:14623956).[UniProtKB/Swiss-Prot Function]