

Product datasheet for **MR222097**

Aldh1a3 (NM_053080) Mouse Tagged ORF Clone

Product data:

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



[View online »](#)

ORF Nucleotide Sequence:

>MR222097 representing NM_053080
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCTACCACCAACGGGCTGTGGAAACGGACAGCCGGATGGAAACCGCCTGCCTTGCCGCGCCCA
 TCCGCAACTTGGAGGTCAAGTTCACCAAGATATTTATCAACAACGACTGGCAGCAATCCAAGAGTGGAA
 AAAGTTTGCCACATATAACCTTCAACACTAGAGAAAATATGTGAGGTGGAAGAAGGAGATAAGCCCGAT
 GTGGACAAGGCTGTGGAGGCCGCTCAAGCTGCCTTCCAGCGGGGATCCCCGTGGCGCCGGCTGGATGCAC
 TGAGCAGAGGCCAGTTGCTGCATCAGCTGGCTGACCTTGTAGAAAGGACCGAGCGATCTGGCTACTCT
 GGAGACCATGGACACCGCAAGCCATTCCTTCATGCCTTTTTCGTCGACCTGGAAGGCTGTATTAAGACC
 TTCAGATATTTTCCGGGTGGGAGACAAAATCCAGGGCAGGACCATCCCACAGATGACAACGTTGTGT
 GCTTACCAGGCATGAGCCCATCGGGTGTGTGGGCCATTACACCATGGAACCTCCCCCTGCTGATGCT
 GGCTGGAAACTGGCTCCTGCCCTGTGCTGTGGGAACACCGTGGTCTGAAGCCAGCTGAGCAGACCCCT
 CTACGGCTCTGTACCTAGCCTCTCTCATCAAAGAGGTCCGGTTCCTCCGGGTGTGGTGAACATTTGAC
 CAGGCTTTGGGCCACTGTGGGAGCAGCAATTTCTCCATCCGAGATCAACAAGATAGCCTTACCCGG
 CTCCACAGAGGTTGAAAGCTGGTCAAGAGCCGCTCCCGGAGCAACCTGAAGAGGGTCACTGGAG
 CTAGGAGGCAAGAACCCTGCATCGTGTGTGCAGATGCTGACTTGGACTTGGCCGTCGAGTGTGCTCACC
 AGGGAGTGTCTCAACCAAGGCCAGTGTGTACAGCGGCTCCAGGGTGTTCGTGGAAGAGCAGGTCTA
 CGGGGAGTTTGTGAGGAGGAGTGTGGAGTTCGCCAAGAAGAGGCCAGTTGGAGACCCCTTCGATGCCAAA
 ACGGAGCAGGGCCCTCAGATCGACAAAAGCAGTTTGCACAAAATCCTCGAGCTGATTGAGAGTGGGAAGA
 AGGAAGGGGCAAGCTAGAATGTGGGGGTGAGCCATGGAGGACAGAGGGCTGTTTCATCAAACCCAGGT
 CTCTCAGATGTTACGGACAACATGAGGATTGCCAAGAGGAGATTTTCGGACCAGTGCAGCCGATCCTG
 AAGTTCAAAAACCTGGAGGAGGTGATCAAGAGAGCGAATAGCACCAGCTATGGACTCACAGCAGCAGTGT
 TCACAAAAACCTGGACAAAGCACTGAAGCTGGCTGCTGCGCTCGAGTCGGGGACAGTCTGGATCAACTG
 CTACAATGCATTTATGCACAGGCTCCATTTGGTGGCTTCAAAATGTCTGGGAATGGCAGAGAAGTGGGA
 GAATATGCTCTGGCTGAATATACAGAAGTAAAACCTGTCACCATCAAACCTCGAGGAGAAGAACCC

**ACGGTACGGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA**

Protein Sequence:

>MR222097 representing NM_053080
 Red=Cloning site Green=Tags(s)

MATTNGAVENQPDGKPPALPRPIRNLEVKFTKIFINNDWHESSGRKFATYNPSTLEKICEVEEGDKPD
 VDKAVEAAQAAFQRGSPWRRDLALSRGQLLHQLADLVERDRAILATLETMDTGKPFLLHAFFVDLEGCIKT
 FRYFAGWADKIQGRTIPTDDNVVCFTRHEPIGVCGAITPWNFPLLMLAWKLAPALCCGNTVVLKPAEQTP
 LTALYLASLIKEVGFPPGVVNI VPGFGPTVGAIISSHPQINKIAFTGSTEVGKLVREAASRNLKRVTL
 LGGKNPCIVCADADLDLAVECAHQGVFFNQGCCTAASRVFVEEQVYGEFVRRSVEFAKKRPVGPDPDAK
 TEQGPQIDQKQFDKILELIESGKKEGAKLECGGSAMEDRGLFIKPTVFDVTDNMRIAKEEIFGPVQPIL
 KFKNLEEVIKRANSTDYGLTAAVFTKNLDKALKLAAALESQVWVINCYNFYAQAPFGGFKMSGNGREL
 EYALAEYTEVKTVTIKLEEKNP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/ja1861_c11.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_053080

ORF Size: 1536 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.

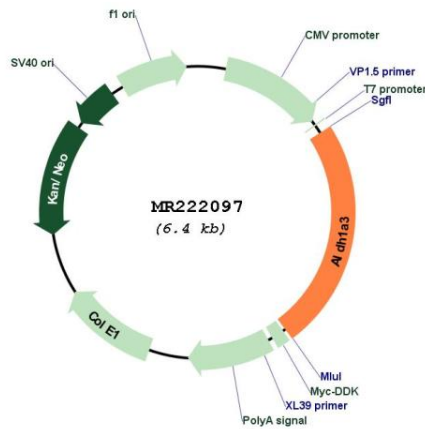
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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_053080.3, NP_444310.3](#)
RefSeq Size: 3423 bp
RefSeq ORF: 1539 bp
Locus ID: 56847
UniProt ID: [Q9JHW9](#)
Cytogenetics: 7 C
MW: 56.6 kDa

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]

Product images:



Circular map for MR222097