

## Product datasheet for **MG217783**

### **Aldh3a1 (NM\_001112725) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Aldh3a1 (NM_001112725) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Aldh3a1
Synonyms:	Ahd-4; Ahd4; Aldh; Aldh3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG217783 representing NM\_001112725  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGCAATATCAGTAGCATCGTGAACCGGCCCGTGATGCCTTTAACTCAGGCAAGACTCGACCGCTGC  
 AGTTCCGGGTTGAGCAGCTGGAGGCGTTGCAGCGCATGATCAACGAGAAGTTGAAAGGCATCTCCAAGGC  
 GCTGGCCTCTAACCTGCGCAAGAATGAATGGACCTCCTACTACGAGGAGGTGGCTCACGTCTGGACGAA  
 ATCGATTTACGATTAAGGGGCTCTCCGATTGGGCTGAGGACGAGCCTGTGGCAAAGACTCGTCAGACCC  
 AGGAAGATGACCTCTACATCCACTCGGAGCCCCTGGGCGTGGTCTTGTATAGGTGCTTGGAACTACCC  
 ATTCAACCTCACCTTACGCCCATGGTGGGTGCCATCGCTGCAGGAAATGCTGTGGTCTCAAGCCCTCG  
 GAAGTGAGTGATCACATGGCAGACCTGCTTCAACACTTATCCCTCAGTATATGGACAAGGATCTGTACC  
 CAGTGATCAAAGGGGGTGTCCCTGAAACCACGGAGCTGCTCAAAGAGAAGTTTGACCACATCATGTACAC  
 AGGGAGCACGGCTGTAGGAAAGATCGTCATGGCGGCTGCCGCAAGCATCTGACCCTGTACCTTGGAG  
 CTTGGAGGAAAGACCCCTTGTACGTAGACAAGGACTGTGATCTAGATGTGGCTTGCCGGCGTATTGCTT  
 GGGGAAAGTTTATGAACAGTGGCCAGACCTGTGTGGCCCCAGACTACATCCTCTGTGACCCCTCCATTCA  
 GAATGAAATTGTGGAGAAGCTCAAAAAGTCACTGAAAGATTTCTATGGGGAAGATGCTAAGCAGTCCCAT  
 GACTATGGGAGGATCATCAACGACCGGCACTTCCAGCGGGTCATAAATCTGATTGACAGCAAGAAAGTAG  
 CCCATGGAGGCACCTGGGATCAGCCTTACGATACATAGCTCCACCATCCTAGTGGATGTGGACCCCA  
 GTCCCCGGTGTGAGGAGGAGATCTTTGGCCGGTGTGCCATTGTGTGTGTTCAAGCTTGGATGAG  
 GCCATTAATTTATCAACCAGCGGAGAGACATCAAGCGGTGGAGTGACAGCCAATGACGTCATTGTTACATCACTGT  
 TCAAGAAAATGATCGCAGAGACATCAAGCGGTGGAGTGACAGCCAATGACGTCATTGTTACATCACTGT  
 GCCCACTTTGCCCTTTGGGGTGTGGGGAACAGCGGCATGGGGGCTACCATGGCAAGAAAAGCTTCGAG  
 ACCTTTTCCACCGCGCTCTTGCTGGTGGTCTCTGCGGAATGAAGAAGCTAACAAGGCCAGGTATC  
 CCCAAGCCAGCCAAGATGCCCGGCAT

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>MG217783 representing NM\_001112725  
 Red=Cloning site Green=Tags(s)

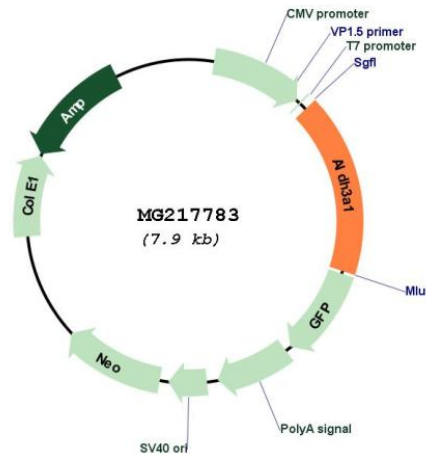
MSNISSIVNRARDAFNSGKTRPLQFRVEQLEALQRMINENLKGISKALASNLKNEWTSYEEVAHVLD  
 IDFTIKGLSDWAEDEPVAKTRQTQEDDLYIHSEPLGVVLVIGAWNYPFNLTIQPMVGAIAAGNAVVLKPS  
 EVSDHMADLLSTLIPQYMDKDLYPVIKGGVPETTELLKEKFDHIMYTGSTAVGKIVMAAAKHLTPVTLE  
 LGGKSPCYVDKCDLDVACRRIAWGKFMNSGQTCVAPDYILCDPSIQNEIVEKLLKSLKDFYGEDAKQSH  
 DYGRIINDRHFRVINLIDSKVAHGGTWDQPSRYIAPTILVDVDPQSPVMQEEIFGPVMPIVCVRSLDE  
 AIKFINQREKPLALYVFSNNDKVIKKMIAETSSGGVTANDVIVHITVPTLPFGGNGSGMGAYHGKKSFE  
 TFSHRRSCLVRSRNEEANKARYPPSPAKMPRH

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

**Plasmid Map:**


ACCN: NM\_001112725

ORF Size: 1359 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.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_001112725.1, NP_001106196.1</u>
<b>RefSeq Size:</b>	1597 bp
<b>RefSeq ORF:</b>	1362 bp
<b>Locus ID:</b>	11670
<b>UniProt ID:</b>	<u>P47739</u>
<b>Cytogenetics:</b>	11 37.96 cM
<b>Gene Summary:</b>	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]