

## Product datasheet for **MG208298**

### **Aldh1a2 (BC075704) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Aldh1a2 (BC075704) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Aldh1a2
Synonyms:	RALDH-2, Aldh1a7, Raldh1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG208298 representing BC075704  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGACTTCCAGCGAGATCGCCATGCCGGCGAGGTGAAGGCCACCCCGCGCTCATGGCCTCGCTGC  
 AGCTCCTGCCGTGCCACGCCAACCTCGAGATCAAGTACACCAAGATCTTTATTAACAATGAATGGCA  
 GAACTCAGAGAGTGGGAGAGTGTCCCTGTCTGTAATCCAGCCACAGGAGCAAGTGTGTGAAGTTCAA  
 GAAGCAGACAAGGTGGATATAGACAAGGCAGTGAAGCAGCCCGCCTTGCTTCTCTCTGGTTCTGTGT  
 GGAGAAGGATGGATGCGTCTGAAAGAGGACGTCTGTTGGACAAGCTTGCAGACTTGGTGAACGGGACAG  
 GGCAACTCTTGAACATGGAATCCCTAAATGGCGTAAGCCATTCTGCAAGCTTTTTACATCGATTTG  
 CAGGGAGTCATCAAACCCTGAGGTATTATGCAGGCTGGGCTGATAAAATTCACGGAATGACCATTCTG  
 TAGATGGAGACTATTTACTTTTACAAGACACGAGCCATTGGAGTGTGTGGACAGATCATCCCGTGGAA  
 CTTCCCTGCTGATGTTACCTGGAAAATGCTCCCGCATTGTCTGTGTTAACACCGTGGTCAAAA  
 CCCGCTGAGCAGACCCGCTCAGTGCACGTATATGGGAGCCCTCATCAAGGAGGCTGGCTTTCCACCCG  
 GAGTCGTCAAATCCTGCCAGGGTATGGGCCAACAGCAGGGGCAGCAATCGCTTCTCACATCGGCATAGA  
 CAAGATTGCATTCACAGGCTCTACTGAGGTTGGAAAGCTTATTCAAGAAGCAGCTGGAAGAAGTAACCTG  
 AAGAGAGTGACCTGGAACCGGAGGGAAGAGCCCTAATATTATTTTGCAGATGCTGACTTGGACTACG  
 CTGTGGAGCAGGCTCACCAGGGTGTGTTCTTCAACCAAGGCCAGTGTGCACCGCAGGGTCTCGCATCTT  
 TGTGGAAGAATCCATCTATGAGGAATTTGTGAAAAGAAGTGTGAAAGGGCCAAGAGGCGCATTGTGGG  
 AGCCCCTTTGATCCACAACCTGAGCAGGGTCTCAGATCGATAAGAAACAATAACAACAAAGTCTGGAGC  
 TTATCCAGACGGTGTGGCTGAGGGCGCCAAGCTGGAGTCCGAGGCAAGGGCTGGGAAGGAAGGGCTT  
 CTTCAATTGAGCCACCGTGTCTCCAACGTCAGTGCATGACATGCGGATTGCCAAGGAGGAGATCTTTGGT  
 CCTGTTCAAGAAATTTTGAAGTTTAAAGACTATGGATGAAGTTATAGAAAGAGCCAATAACTCAGACTTTG  
 GACTTGTAGCAGCTGTCTTCACTAATGACATCAACAAGGCTCTCATGGTATCCTCCGCAATGCAAGCTGG  
 GACAGTTTGGATCAATTGTTACAATGCCTTAAATGCGCAGAGCCCTTTGGGGGTTCAAGATGTCTGGA  
 AATGGGAGAGAAATGGGTGAGTTTGGCTTACGGGAGTATTCAGAAGTAAAGACCGTGACGGTGAAGATCC  
 CCCAGAAGAACTCC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG208298 representing BC075704  
 Red=Cloning site Green=Tags(s)

MTSSEIAMPGEVKADPAALMASLQLLPSPTPNLEIKYTKIFINNEWQNSESGRVFVPCNPATGEQVCEVQ  
 EADKVDIDKAVQAARLAFSLGSVWRRMDASERGRLLDKLADLVERDRATLATMESLNGGKPFLLQAFYIDL  
 QGVIKTLRYAGWADKIHGMTIPVDGDYFTFRHEPIGVCGQIIPWNFPLLMFTWKIAPALCCGNTVVIIK  
 PAEQTPLSALYMGALIKEAGFPVGVNIPGYGPTAGAAIASHIGIDKIAFTGSTEVGKLIQEAAGRSNL  
 KRVTLELGGKSPNIIIFADADLDYAVEQAHQGVFFNQGCCTAGSRIFVEESIYEEFVKRSVERAKRRIIVG  
 SPFDPTTEQGPQIDKKQYNKVLLEIQSGVAEGAKLECGGKGLGRKGFFIEPTVFSNVTDDMRIAKEEIFG  
 PVQEILRFKTMDEVIERANNSDFGLVAAVFTNDINKALMVSSAMQAGTVWINCYNALNAQSPFGGFKMSG  
 NGREMGFEGLREYSEVKTVTVKIPQKNS

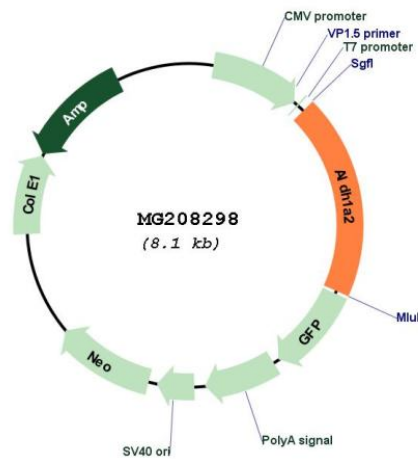
**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:


**Plasmid Map:**


<b>ACCN:</b>	BC075704
<b>ORF Size:</b>	1556 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	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>	<a href="#">BC075704</a> , <a href="#">AAH75704</a>
<b>RefSeq Size:</b>	2242 bp
<b>RefSeq ORF:</b>	1556 bp
<b>Locus ID:</b>	19378
<b>Cytogenetics:</b>	9 39.85 cM
<b>Gene Summary:</b>	Converts retinaldehyde to retinoic acid (PubMed:8797830). Recognizes as substrates free retinal and cellular retinol-binding protein-bound retinal (By similarity). Lacks activity with benzaldehyde, acetaldehyde and octanal (PubMed:8797830). Displays complete lack of activity with citral (By similarity).[UniProtKB/Swiss-Prot Function]