

## Product datasheet for **RG231231**

### ALDH8A1 (NM\_001193480) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH8A1 (NM_001193480) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALDH8A1
Synonyms:	ALDH12; DJ352A20.2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG231231 representing NM_001193480 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTGGAACAAACGCACCTTTTGATGCTGGAAAACCTTCATAGATGGAAAATTTTACCTTGTAGCTCAT  
ATATAGATTCTTACGACCCATCAACAGGGGAAGTGTATTGCAGAGTGCCAAATAGTGAAAAGACGAGAT  
CGAAGCCCGGTCAAGGCCGCCAGAGAAGCCTTCCCAGCTGGTCATCCCGCAGCCCCAGGAGCGCTCA  
CGGTCCTGAACCAGGTGGCGGATTTGCTGGAGCAGTCCCTGGAGGATTTGCCAGGCCGAGTCTAAAG  
ACCAAGGAAAACCTTAGCACTGGCAAGAACCATGGACATTCCCCGGTCTGTGCAGAACTCAGGTTCTT  
CGTTCCTCCAGCCTGCACCACACGTCAGAGTGCACGCAGATGGACCACCTGGGCTGCATGCACTACCG  
GTGCGGGCCCCGGTGGGAGTCCGTGTTCCACCAGGTGTGGTCAATATTGTGTTTGAACCGGGCCAGGG  
TGGGTGAGGCCCTGGTGTCCCACCCAGAGGTGCCCTGATCTCCTTACCAGGGAGCCAGCCACCCTGA  
GCGGATACCCAGCTGAGCGCTCCCCACTGCAAAAAGCTCCTCCTGGAGCTGGGGGGCAAGAATCCTGCC  
ATCATCTTTGAGGACGCCAACCTGGATGAGTGCATTCCGGCAACCGTCAGGTCCAGCTTTGCCAACAGG  
GTGAAATCTGTCTCTGTACCAGCAGGATCTTTGTCCAGAAGAGCATCTATAGTGAATTTTAAAGAGATT  
TGTAGAAGCTACCAGAAAGTGGAAAGTCAGAAGTTACGTCAAGAGAGCTTTGCTGAAGGTGCCAAATTTGGT  
AGTAAAGCACATTTGGAGAAAGTCAGAAGTTACGTCAAGAGAGCTTTGCTGAAGGTGCCAAATTTGGT  
GCGGTGAGGGAGTGGATAAGTTGAGCCTCCTGCCAGGAACAGGAGGCTACTTTATGCTTCCCACGGT  
GATAACAGACATTAAGGATGAATCCTGCTGCATGACGGAAGAGATATTTGGTCCAGTGACGTGTGTGCTC  
CCCTTTGATAGTGAAGAGGAGGTGATTGAAAGAGCCAACAACGTTAAGTATGGGCTGGCGCTACCGTGT  
GGTCCAGCAATGTGGGCGCGTCCACCGGTGGCTAAGAAGCTGCAGTCTGGCTTGGTCTGGACCAACTG  
CTGGCTCATCAGGGAGCTGAACCTTCTTTCCGGGGGATGAAGAGTTCTGGAATAGGTAGAGAGGGAGCC  
AAGGACTTACGACTTCTCACTGAGATCAAAACCATCACCGTTAAACAC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG231231 representing NM\_001193480  
 Red=Cloning site Green=Tags(s)

MAGTNALLMLENFIDGKFLPCSSYIDSYPSTGEVYCRVPNSGKDEIEAAVKAAREAFPSWSSRSPQERS  
 RVLNQVADLLEQSLLEFAQAESKDQKTLALARTMDIPRSVQNFRRFASSSLHHTSECTQMDHLGCMHYT  
 VRAPVGVGPPGVVNIIVFGTGRVGEALVSHPEVPLISFTGSQPTAERITQLSAPHCKKLSLELGGKNPA  
 IIFEDANLDECIPATVRSFANQGEICLCTSRIFVQKSIYSEFLKRFVEATRKKWVGIPSDPLVSI GALI  
 SKAHLEKVRSYVKRALAEGAQIWCGEVVDKLSLPARNQAGYFMLPTVITDIKDESCMTEEIFGPVTCVV  
 PFDSEEEVIERANNV KYGLAATVWSSNVGRVHRVAKKLQSGLVWTNCWLI RELNLPFGGMKSSGIGREGA  
 KDSYDFFTEIKTITVKH

TRTRPLE - GFP Tag - V

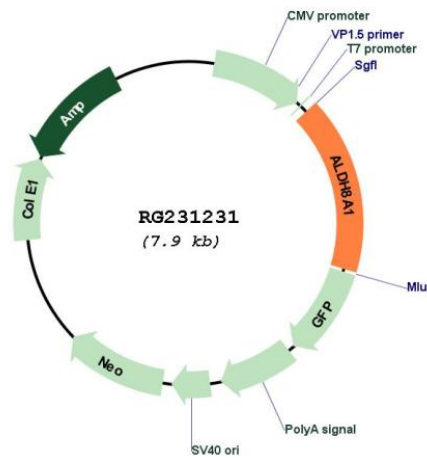
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:**

NM\_001193480

<b>ORF Size:</b>	1311 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="#">NM_001193480.2</a>
<b>RefSeq Size:</b>	2417 bp
<b>RefSeq ORF:</b>	1314 bp
<b>Locus ID:</b>	64577
<b>UniProt ID:</b>	<a href="#">Q9H2A2</a>
<b>Cytogenetics:</b>	6q23.3
<b>Protein Families:</b>	Druggable Genome
<b>Gene Summary:</b>	This gene encodes a member of the aldehyde dehydrogenase family of proteins. The encoded protein has been implicated in the synthesis of 9-cis-retinoic acid and in the breakdown of the amino acid tryptophan. This enzyme converts 9-cis-retinal into the retinoid X receptor ligand 9-cis-retinoic acid, and has approximately 40-fold higher activity with 9-cis-retinal than with all-trans-retinal. In addition, this enzyme has been shown to catalyze the conversion of 2-aminomuconic semialdehyde to 2-aminomuconate in the kynurenine pathway of tryptophan catabolism. [provided by RefSeq, Jul 2018]