

## Product datasheet for **RG223398**

### Aldehyde dehydrogenase 10 (ALDH3A2) (NM\_000382) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Aldehyde dehydrogenase 10 (ALDH3A2) (NM_000382) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALDH3A2
Synonyms:	ALDH10; FALDH; SLS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG223398 representing NM\_000382  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGGAGCTCGAAGTCCGGCGGGTCCGACAGCGCTTCTGTCCGGCCGGTCCGACCTCTGCGGTTTCGGC  
 TGCAGCAGCTGGAGGCCCTGCGGAGGATGGTGCAGGAGCGGAGAAGGATATCCTGACGGCCATCGCCGC  
 CGACCTGTGCAAGAGTGAATTCAATGTGTACAGTCAGGAAGTCATTACTGTCCTTGGGAAATTGATTTT  
 ATGCTTGAGAATCTTCTGAATGGGTTACTGCTAAACCAGTTAAGAAGAAGCTGCTCACCATGCTGGATG  
 AGGCCTATATTCAGCCACAGCCTCTGGGAGTGGTGTGATAATCGGAGCTTGAATTACCCCTTCGTTCT  
 CACCATTAGCCACTGATAGGAGCCATCGCTGCAGGAAATGCTGTGATTATAAAGCCTTCTGAAGTGA  
 GAAAATACAGCCAAGATCTTGGCAAAGCTTCTCCCTCAGTATTTAGACCAGGATCTCTATATTGTTATTA  
 ATGGTGGTGTGAGGAAACCACGGAGCTCTGAAGCAGCGATTTGACCACATTTTCTATACGGGAAACAC  
 TCGCGTTGGCAAATGTCATGGAAGCTGCTGCCAAGCATCTGACCCCTGTGACTCTTGAAGTGGGAGGG  
 AAAAGTCCATGTTATATTGATAAAGATTGTGACCTGGACATTGTTTGCAGACGCATAACCTGGGAAAT  
 ACATGAATTGTGGCCAAACCTGCATTGCACCCGACTATATTCTCTGTGAAGCATCCCTCCAAATCAAAT  
 TGTATGGAAGATTAAGGAAACAGTGAAGGAATTTTATGGAGAAAAATAAAAAGAGTCTCCTGATTATGAA  
 AGGATCATCAATCTTCGTCATTTAAGAGGATACTAAGTTTGCTTGAAGGACAAAAGATAGCTTTTGGTG  
 GGGAGACTGATGAGGCCACACGCTACATAGCCCAACAGTACTTACCGATGTTGATCCTAAAACCAAGGT  
 GATGCAAGAAGAAATTTTGGACCAATCTTCCAATAGTGCTGTGAAAAATGTAGATGAGGCCATAAAT  
 TTCATAAATGAACGTGAAAAGCCTCTGGCTCTTTATGTATTTTCGATAACCATAAGCTCATCAAACGGA  
 TGATTGATGAGACATCCAGTGGAGGTGCACAGGCAATGACGTCATTATGCACTTACGCTCAACTCTTT  
 CCCATTTGGAGGAGTGGGTTCCAGTGGGATGGGAGCTTATCACGGAAAACATAGTTTTGATACTTTTCT  
 CATCAGCGTCCCTGTTTATTA AAAAGTTTAAAGAGAGAAGGTGCTAACAACTCAGATATCTCCCAACA  
 GCCAGTCAAAGGTGGATTGGGAAAATTTTCTCTTGAACGGTTCAACAAAGAAAAACTCGGTCTCCT  
 GTTGCTCACTTCTGGGTATTGTAGCCGCTGTGCTTGTCAAGGCAGAATATTAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG223398 representing NM\_000382  
 Red=Cloning site Green=Tags(s)

MELEVRRVRQAFLSGRSRPLRFRLQQLALRRMVQEREKIDILTAIADLCKSEFNVYSQEVITVLGEIDF  
 MLENLPEWVTAKPVKKNVLTMLDEAYIQPQLGVVLIIGAWNYPFVLTIQPLIGATAAGNAVLIKPSLS  
 ENTAKILAKLLPQYLDQDLYIVINGGVEETTELLKQRFDHIFYTGNATVKGIVMEAAAHLTPVTLELGG  
 KSPCYIDKDCDLDIVCRRIWGYMNCQGTICAPDYILCEASLQNIQVWIKETVKEFYGENIKESPDYE  
 RIINLRHFKRILSLEGGKIAFGGETDEATRYIAPTVLTDVDPKTKVMQEEIFGPILPIVPKKNVDEAIN  
 FINEREKPLALYVFSHNHKLKRMIDETSSGGVTGNDVIMHFTLNSFPFGVGGSSGMGAYHGKHSFDTF  
 HQRPCLLKSFKREGANKLRYPPNSQSKVDWGFLLKRFNKEKLGTTTTLFLGIVA AVLKAEY

TRTRPLE – GFP Tag – V

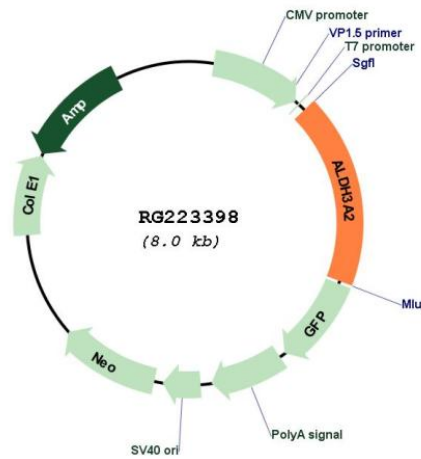
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_000382

ORF Size: 1455 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.

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).

<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_000382.3</a>
<b>RefSeq Size:</b>	3702 bp
<b>RefSeq ORF:</b>	1458 bp
<b>Locus ID:</b>	224
<b>UniProt ID:</b>	<a href="#">P51648</a>
<b>Cytogenetics:</b>	17p11.2
<b>Domains:</b>	aldedh
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Arginine and proline metabolism, Ascorbate and aldarate metabolism, beta-Alanine metabolism, Butanoate metabolism, Fatty acid metabolism, Glycerolipid metabolism, Glycolysis / Gluconeogenesis, Histidine metabolism, Limonene and pinene degradation, Lysine degradation, Metabolic pathways, Propanoate metabolism, Pyruvate metabolism, Tryptophan metabolism, Valine, leucine and isoleucine degradation
<b>Gene Summary:</b>	Aldehyde dehydrogenase isozymes are thought to play a major role in the detoxification of aldehydes generated by alcohol metabolism and lipid peroxidation. This gene product catalyzes the oxidation of long-chain aliphatic aldehydes to fatty acid. Mutations in the gene cause Sjogren-Larsson syndrome. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]