

## Product datasheet for **RG221335**

### ALDH3B1 (NM\_001030010) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH3B1 (NM_001030010) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALDH3B1
Synonyms:	ALDH4; ALDH7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG221335 representing NM_001030010 Red=Cloning site Blue=ORF Green=Tags(s)

GACGTTGTATACGACTCCTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GGCGCGCC**

ATGGACCCCTTGGGGACACGCTGCGGCGACTGCGGGAGGCCCTCCACGCGGGGCGCACGGCCAGCTG  
AGTTCGGGCTGCGCAGCTCCAAGGCCTGGGCCGCTTCTGCAAGAAAACAAGCAGCTTCTGCACGACGC  
ACTGGCCAGGACCTGCACAAGGCCACGCAGCTGGACTCCGCCTTCATCCGGAAGGAGCCCTTTGGCCTG  
GTCCTCATATTGCGCCCTGGAACATCCGCTGAACCTGACGCTGGTGCCCTCGTGGGAGCCCTCGCTG  
CAGGGAAGTGTGGTGTGAAGCCATCGGAGATTAGCAAGAACGTCGAGAAGATCCTGGCCGAGGTGCT  
GCCCAATACGTGGACCAGAGCTGCTTTGCTGTGGTGTGGGCGGGCCCAAGGAGACGGGCGAGCTGCTA  
GAGCACAGGTTGACTACATCTTCTTACAGGGAGCCCTCGTGTGGGCAAGATTGTTATGACTGCTGCCG  
CCAAGCACCTGACACCTGTACCCTGGAGCTGGGGGCAAGAACCCTTGCTACGTGGACGACAACCTGCGA  
CCCCAGACCGTGGCCAACCGCTGGCCTGGTTCCGCTACTTCAACGCCGGCCAGACCTGCGTGGCCCC  
GACTACGTCTATGCAGCCCTGAGATGCAGGAGAGGCTGCTGCCTGCCCTGCAGAGCACCATCACCCGTT  
TCTATGGCGACGACCCCCAGAGCTCCCCAAACCTGGGCCGCATCATCAACCAGAAACAGTCCAGCGGT  
GCGGGCATTGCTGGGCTGCGGCCGTGTGGCCATTGGGGCCAGAGCGATGAGAGCGATCGCTACATCGCC  
CCCACGGTGTGGTGGATGTGCAGGAGATGGAGCCTGTGATGCAGGAGGAGATCTTCGGGCCATCCTG  
CCATCGTGAACGTGCAGAGCTTGGACGAGGCCATCGAGTTCATCAACCGCGGGGAGAAGCCCTGGCCCT  
GTACGCCCTTCTCAACAGCAGCCAGGTGGTCAAGCGGGTGTGACCCAGACCAGCAGCGGGGCTTCTGT  
GGGAACGACGGCTTTCATGCACATGACCCTGGCCAGCCTGCCTTTTGGAGGAGTGGGTGCCAGTGGGATGG  
GCCGGTACCATGGCAAGTTCTCCTTCGACACCTTCTCCACCATCGCGCCTGCCTCCTGCGCAGCCCGGG  
GATGGAGAAGCTCAACGCCCTCCGCTACCCGCCGAATCGCCGCGCCGCTGAGGATGCTGCTGGTGGCC  
ATGGAGGCCCAAGGCTGCAGCTGCACACTGCTC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG221335 representing NM\_001030010  
 Red=Cloning site Green=Tags(s)

MDPLGDTLRRLEAFHAGRTRPAEFRAAQLQGLGRFLQENKQLLHDALAQDLHKATQLDSAFIRKEPFG  
 VLIIAPWNYPLNLTLVPLVGALAAGNCVVLKPSEISKVVEKILAEVLPQYVDQSCFAVVLGGPQETGQLL  
 EHRFDYIFFTGSPRVGKI VMTAAAKHL TPVTLELGGKNPCYVDDNCDPQTVANRVAVWFNAGQTCVAP  
 DYVLCSPEMQERLLPALQSTITRFYGGDDPQSSPNLGRINQKQFQRLRALLGCGRVAIGGQSDSDRYIA  
 PTVLVDVQEMEPVMQEEIFGPILPIVNVQSLDEAIEFINRREKPLALYAFNSSQVVKRVLTQTSSGGFC  
 GNDGFMHMTLASLPFGGAGSMGRYHGKFSFDTF SHHRACLLRSPGMEKLNALRYPPQSPRRRLMLLVA  
 MEAQGCSCTLL

TRTRPLE – GFP Tag – V

**Restriction Sites:** AscI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001030010

**ORF Size:** 1293 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).

**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\\_001030010.3](#)

**RefSeq Size:** 2746 bp

**RefSeq ORF:** 1296 bp

**Locus ID:** 221

**UniProt ID:** [P43353](#)

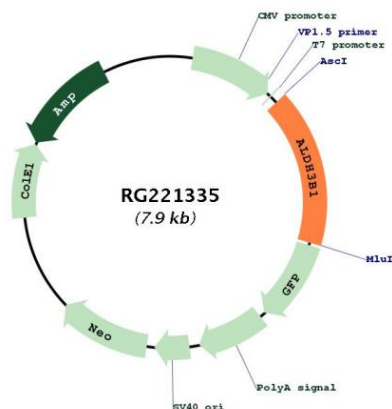
**Cytogenetics:** 11q13.2

**Protein Families:** Druggable Genome

**Protein Pathways:** Drug metabolism - cytochrome P450, Glycolysis / Gluconeogenesis, Histidine metabolism, Metabolic pathways, Metabolism of xenobiotics by cytochrome P450, Phenylalanine metabolism, Tyrosine metabolism

**Gene Summary:** This gene encodes a member of the aldehyde dehydrogenase protein family. Aldehyde dehydrogenases are a family of isozymes that may play a major role in the detoxification of aldehydes generated by alcohol metabolism and lipid peroxidation. The encoded protein is able to oxidize long-chain fatty aldehydes in vitro, and may play a role in protection from oxidative stress. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2014]

## Product images:



Circular map for RG221335