

## Product datasheet for **RG200723**

### **ALDH1A1 (NM\_000689) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	ALDH1A1 (NM_000689) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALDH1A1
Synonyms:	ALDC; ALDH-E1; ALDH1; ALDH11; HEL-9; HEL-S-53e; HEL12; PUMB1; RALDH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG200723 representing NM\_000689  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTCATCCTCAGGCACGCCAGACTTACCTGTCCTACTCACCGATTTGAAGATTCAATATACTAAGATCT  
 TCATAAACAAATGAATGGCATGATTCAAGTGGCAAGAAATTTCTGTCTTTAATCCTGCAACTGAGGA  
 GGAGCTCTGCCAGGTAGAAGAAGGAGATAAGGAGGATGTTGACAAGGCAGTGAAGGCCGCAAGACAGGCT  
 TTTGAGATTGGATCCCCGTGGCCTACTATGGATGCTTCCGAGAGGGGGCGACTATTATACAAGTTGGCTG  
 ATTTAATCGAAAGAGATCGTCTGCTGCTGGCGACAATGGAGTCAATGAATGGTGGAAAATCTATTCCAA  
 TGCATATCTGAATGATTTAGCAGGCTGCATCAAAACATTGCGCTACTGTGCAGGTTGGGCTGACAAGATC  
 CAGGGCCGTACAATACCAATTGATGAAATTTTTTACATATAACAAGACATGAACCTATTGGTGTATGTG  
 GCCAAATCATTCCCTTGAATTTCCCGTTGGTTATGCTCATTGGAAGATAGGGCCTGCAGTGCAGCTGTGG  
 AAACACAGTGGTGTCAAACCAGCAGAGCAAACCTCTCACTGCTCTCCACGTGGCATCTTTAATAAAA  
 GAGGCAGGGTTTCTCCTGGAGTAGTGAATATTGTTCTGGTTATGGGCCACAGCAGGGGAGCCATTT  
 CTCTCACATGGATATAGACAAAGTAGCCTTACAGGATCAACAGAGGTTGGCAAGTTGATCAAAGAAGC  
 TGCCGGGAAAAGCAATCTGAAGAGGGTGACCCTGGAGCTTGGAGGAAAGAGCCCTTGCAATTGTGTTAGCT  
 GATGCCGACTTGGACAATGCTGTTGAATTTGCACACCATGGGGTATTCTACCACCAGGGCCAGTGTGTA  
 TAGCCGCATCCAGGATTTTTGTGGAAGAATCAATTTATGATGAGTTTGTTCGAAGGAGTGTGAGCGGGC  
 TAAGAAGTATATCCTTGGAAATCCTCTGACCCAGGAGTCACTCAAGGCCCTCAGATTGACAAGGAACAA  
 TATGATAAAATACTTGACCTCATTGAGAGTGGGAAGAAAGAAGGGCCAAACTGGAATGTGGAGGAGGCC  
 CGTGGGGGAATAAAGGCTACTTTGTCCAGCCACAGTGTCTCTAATGTTACAGATGAGATGCGCATTGC  
 CAAAGAGGAGATTTTTGGACCAGTGCAGCAAATCATGAAGTTTAAATCTTTAGATGACGTGATCAAAGA  
 GCAAACAATACTTTCTATGGCTTACAGCAGGAGTGTACCAAAGACATTGATAAAGCCATAACATCT  
 CCTCTGCTCTGCAGGCAGGAACAGTGTGGGTGAATTGCTATGGCGTGGTAAGTGCCAGTCCCTTTGG  
 TGGATTCAAGATGTCTGAAATGGAAGAGAACTGGGAGAGTACGGTTTCCATGAATATACAGAGTCAAA  
 ACAGTCACAGTGAATACTCTCAGAAGAACTCA

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG200723 representing NM\_000689  
 Red=Cloning site Green=Tags(s)

MSSSGTPDLPVLLTDLKIYTKIFINNEWHDSVSGKKFPVFNPAEEELCQVEEGDKEDVDKAVKAARQA  
 FQIGSPWRTMDASERGRLLYKLADLIERDRLLLATMESMNGGKLYSNAYLNLAGCIKTLRYCAGWADKI  
 QGRTIPIDGNFFTYRHEPIGVCGQIIPWNFPLVMLIWKIGPALSCGNTVVVKPAEQTPLTALHVASLIK  
 EAGFPVPGVNIIVPGYGPTAGAAISSHMDIDKVAFTGSTEVGKLIKEAAGKSNLKRVTLELGGKSPCIVLA  
 DADLDNAVEFAHHGVFYHQGCCIAASRIFVEESIYDEFVRRSVERAKKYILGNPLTPGVQTQGPQIDKEQ  
 YDKILDLESKKEGAKLECGGPPWGNKGYFVQPTVFSNVTDEMRIAKEEIFGPVQQIMKFKSLDDVIKR  
 ANNTFYGLSAGVFTKIDKAITISSALQAGTVVWNCYGVVSAQCPFGGFKMSGNGRELGEYGFHEYTEVK  
 TVTVKISQKNS

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_000689

**ORF Size:** 1503 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\\_000689.5](#)

**RefSeq Size:** 2116 bp

**RefSeq ORF:** 1506 bp

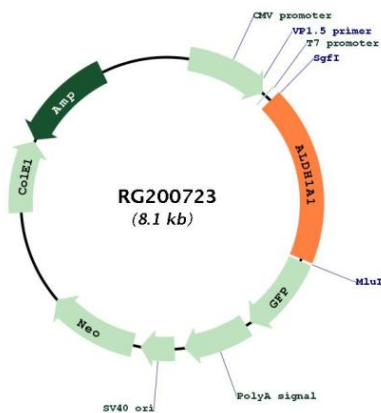
**Locus ID:** 216

**UniProt ID:** [P00352](#)

**Cytogenetics:** 9q21.13

Domains:	aldedh
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS
Protein Pathways:	Metabolic pathways, Retinol metabolism
Gene Summary:	The protein encoded by this gene belongs to the aldehyde dehydrogenase family. Aldehyde dehydrogenase is the next enzyme after alcohol dehydrogenase in the major pathway of alcohol metabolism. There are two major aldehyde dehydrogenase isozymes in the liver, cytosolic and mitochondrial, which are encoded by distinct genes, and can be distinguished by their electrophoretic mobility, kinetic properties, and subcellular localization. This gene encodes the cytosolic isozyme. Studies in mice show that through its role in retinol metabolism, this gene may also be involved in the regulation of the metabolic responses to high-fat diet. [provided by RefSeq, Mar 2011]

### Product images:



Circular map for RG200723