

Product datasheet for **RG216668**

ALDH1A2 (NM_170697) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH1A2 (NM_170697) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALDH1A2
Synonyms:	RALDH(II); RALDH2; RALDH2-T
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG216668 representing NM_170697 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGATGCTTCAGAAAGGGGACGTCTGTTGGATAAGCTTGCAGACTTGGTGAACGGGACAGGGCAGTTC
TTGCAACCATGGAATCCCTAAATGGTGGCAAACCATTCCTGCAAGCTTTTTATGTGGATTGCAGGGCGT
CATCAAAACCTTTCGATATTACGCAGGCTGGGCTGATAAAATTCATGGGATGACCATTCTGTAGATGGA
GACTATTTACCTTTACAAGACATGAACCCATTGGAGTGTGTGGACAGATCATCCATGGAACCTCCCCC
TGCTGATGTTTGCTGGAAAATAGCTCCAGCTTTGTGCTGTGGCAATACAGTAGTTATTAAGCCAGCAGA
GCAAACACCACTCAGTGCCTCTACATGGGAGCCCTCATCAAGGAGGCTGGCTTTCCTCCCGGGGTCATC
AATATTTTGGCAGGATATGGGCCAACGGCTGGGGCAGCAATAGCTTCTCACATTGGCATAGACAAGATTG
CATTACAGGGTCTACTGAGGTTGAAAGCTTATCCAAGAAGCAGCTGGAAGAAGTAATTTGAAGAGAGT
AACTCTGGAACCTGGAGGCCAAAAGTCTAATATTTTTGCTGATGCTGACTTGGACTATGCTGTGGAG
CAGGCCACCAGGGTGTGTTCTCAATCAAGGTCAGTGTGACTGCAGGCTCTCGCATCTTCGTGGAGG
AGTCCATCTATGAGGAGTTTGTGAGAAGAAGCGTGGAGCGGGCCAAGAGGCGCGTAGTGGGGAGTCCCTT
TGACCCCACTGAGCAGGGTCCCGAGATTGATAAGAAACAGTACAACAAGATCTTGAACCTACCCAG
AGTGGTGTGGCTGAGGGCGCCAAGCTGGAATGTGGAGGCAAAGGACTGGGCGGAAAAGGGGTTTTTCATTG
AGCCACAGTGTTCACAGTCACTGATGATATGCGGATTGCCAAGGAGGAGATCTTTGGCCCTGTTCA
GGAAATTTTGAATTTAAGACGATGGATGAAGTTATCGAAAGAGCCAATAACTCAGACTTTGGACTCGTA
GCAGCTGTCTTTACTAATGACATCAACAAGGCCCTCACAGTGTCTTCTGCAATGCAAGCTGGGACTGTTT
GGATCAATTGTTACAATGCCTTAAATGCCAGAGCCCCTTTGGGGGATTCAAGATGTCTGGAAATGGGAG
AGAAATGGGAGAATTTGGCTTGCGGGAGTACTCAGAAAGTAAAGACGGTGACAGTAAAGATCCCCAGAAG
AACTCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG216668 representing NM_170697
Red=Cloning site Green=Tags(s)

MDASERGRLLDKLADLVERDRAVLATMESLNGGKPFLLQAFYVDLQGVIKTFRYYAGWADKIHGMTIPVDG
 DYFTFTRHEPIGVCGQIIPWNFPLLMFAWKIAPALCCGNTVVIKPAEQTPLSALYMGALIKEAGFPPGVI
 NILPGYPTAGAAIASHIGIDKIAFTGSTEVGKLIQEAAGRSNLKRVTLLEGGKSPNIIIFADADLDYAVE
 QAHQGVFFNQGCCTAGSRIFVEESIYEYEFVRRSVERAKRRVVGSPFDPTTEQGPQIDKKQYNKILELIQ
 SGVAEGAKLECGGKGLGRKGFIEPTVFSNVTDMMRIAKEEIFGPVQEILRFKTMDEVIERANNSDFGLV
 AAVFTNDINKALTVSSAMQAGTVWINCYNALNAQSPFGGFKMSGNGREMGEFGLREYSEVKTVTVKIPQK
 NS

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_170697

ORF Size: 1266 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_170697.3](#)

RefSeq Size: 3142 bp

RefSeq ORF: 1269 bp

Locus ID: 8854

UniProt ID: [O94788](#)

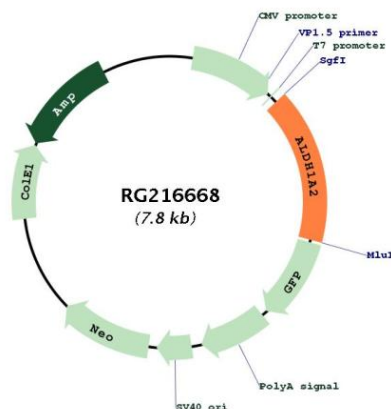
Cytogenetics: 15q21.3

Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Retinol metabolism

Gene Summary: This protein belongs to the aldehyde dehydrogenase family of proteins. The product of this gene is an enzyme that catalyzes the synthesis of retinoic acid (RA) from retinaldehyde. Retinoic acid, the active derivative of vitamin A (retinol), is a hormonal signaling molecule that functions in developing and adult tissues. The studies of a similar mouse gene suggest that this enzyme and the cytochrome CYP26A1, concurrently establish local embryonic retinoic acid levels which facilitate posterior organ development and prevent spina bifida. Four transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, May 2011]

Product images:



Circular map for RG216668