

Product datasheet for **RG234289**

ALDH1A2 (NM_001206897) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH1A2 (NM_001206897) 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)



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ORF Nucleotide Sequence:

>RG234289 representing NM_001206897
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAAGAATCAGTGTGAGACTGTTTGGTTAAAATCCCAATAAACTGAACTGATCTTTATAAACAACG
 AGTGGCAGAACTCAGAGAGTGGGAGAGTGTCCCTGTCTATAATCCAGCCACAGGAGAACAGGTGTGTGA
 AGTTCAAGAAGCAGACAAGGCAGATATAGACAAAGCAGTGCAGGCAGCCCGCCTGGCTTTCTCTTGGT
 TCAGTGTGGAGAAGGATGGATGCTTCAGAAAGGGGACGCTCTGTTGGATAAGCTTGCAGACTTGGTGAAC
 GGGACAGGGCAGTTCTTGAACCATGGAATCCCTAAATGGTGGCAAACATTCTGCAAGCTTTTTATGT
 GGATTTGCAGGGCGTCATCAAACCTTTTCGATATTACGCAGGCTGGGCTGATAAAATTCATGGGATGACC
 ATTCCTGTAGATGGAGACTATTTACCTTTACAAGACATGAACCCATTGGAGTGTGTGGACAGATCATCC
 CATGGAACCTCCCTGCTGATGTTTGCCTGGAAAATAGCTCCAGCTTTGTGCTGTGGCAATACAGTAGT
 TATTAAGCCAGCAGAGCAAACCACTCAGTGCCTCTACATGGGAGCCCTCATCAAGGAGGCTGGCTTT
 CCTCCCGGGTCAATATTTTCCAGGATATGGGCCAACGGCTGGGGCAGCAATAGCTTCTCACATTG
 GCATAGACAAGATTGCATTCACAGGGTCTACTGAGGTTGAAAAGCTTATCCAAGAAGCAGCTGGAAGAAG
 TAATTTGAAGAGAGTAAGTCTGGAACCTGGAGGCAAAAGTCTTAATATTATTTTGTGATGCTGACTTG
 GACTATGCTGTGGAGCAGGCCACCAGGGTGTGTTCTTCAATCAAGGTCAGTGTGCACTGCAGGCTCTC
 GCATCTTCGTGGAGGAGTCCATCTATGAGGAGTTTGTGAGAAGAAGCGTGGAGCGGGCAAGAGGCGCGT
 AGTGGGGAGTCCCTTTGACCCACCCTGAGCAGGGTCCCAGATTGATAAAGAACAGTACAACAAGATC
 TTGGAACATCAGAGTGGTGTGGCTGAGGGCGCCAAGCTGGAATGTGGAGGCAAGGACTGGGCCGAA
 AGGGGTTTTTCAATTGAGCCACAGTGTTCACACGCTCACTGATGATATCGCGATTGCCAAGGAGGAGT
 CTTTGGCCCTGTTTCAGGAAATTTGAGATTTAAGACGATGGATGAAGTTATCGAAAAGAGCCAATAACTCA
 GACTTTGGACTCGTAGCAGCTGTCTTACTAATGACATCAACAAGGCCCTCACAGTGTCTTCTGCAATGC
 AAGCTGGGACTGTTTGGATCAATTGTTACAATGCCTTAAATGCCAGAGCCCTTTGGGGGATTCAAGAT
 GTCTGGAATGGGAGAGAAATGGGAGAATTTGGCTTGGGGAGTACTCAGAAGTTAAGACGGTGACAGTA
 AAGATCCCCAGAAGAACTCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG234289 representing NM_001206897
 Red=Cloning site Green=Tags(s)

MKNQCETVWLKSPIKLLIFINNEWQNSESGRVFPVYNPATGEQVCEVQEADKADIDKAVQAARLAFSLG
 SVWRRMDASERGRLLDKLADLVERDRAVLATMESLNGGKPFLLQAFYVDLQGVIKTFRYYAGWADKIHGMT
 IPVGDGYFTFTRHEPIGVCGQIIPWNFPLLMFAWKIAPALCCGNTVVIKPAEQTPLSALYMGALIKEAGF
 PPGVINILPGYGPATAGAAIASHIGIDKIAFTGSTEVGKLIQEAAGRSNLKRVTLLELGGKSPNIIIFADADL
 DYAVEQAHQGVFFNQGCCTAGSRIFVEESIYEEFVRRSVERAKRRVVGSPFDPTTEQGPQIDKKQYNKI
 LELIQSGVAEGAKLECGGKGLGRKGFIEPTVFSNVTDDMRIAKEEIFGPVQEILRFKTMDEVIERANNS
 DFGLVAAVFTNDINKALTVSSAMQAGTVWINCYNALNAQSPFGGFKMSGNGREMGEFGLREYSEVKTVTV
 KIPQKNS

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001206897

ORF Size: 1491 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_001206897.1](#), [NP_001193826.1](#)

RefSeq Size: 3703 bp

RefSeq ORF: 1494 bp

Locus ID: 8854

UniProt ID: [O94788](#)

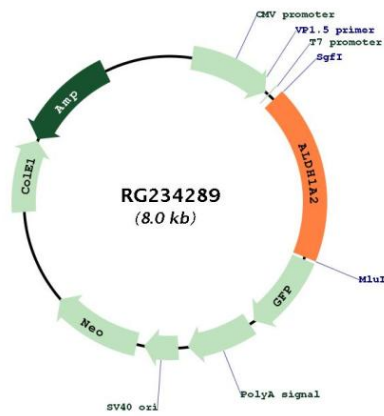
Cytogenetics: 15q21.3

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 RG234289