

## Product datasheet for **SC309760**

### ALDH1A2 (NM\_003888) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH1A2 (NM_003888) Human Untagged Clone
Tag:	Tag Free
Symbol:	ALDH1A2
Synonyms:	RALDH(II); RALDH2; RALDH2-T
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC109995 sequence for NM_170697 edited (data generated by NextGen Sequencing)

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ATGGATGCTTCAGAAAGGGGACGCTGTTGGATAAGCTTGCAGACTTGGTGGAAACGGGAC
AGGGCAGTTCTTCAACCATGGAATCCCTAAATGGTGGCAAACCATTCCTGCAAGCTTTT
TATGTGGATTTGCAGGGCGTCATCAAAACCTTTTCGATATTACGCAGGCTGGGCTGATAAA
ATTCATGGGATGACCATTCCTGTAGATGGAGACTATTTTACCTTTACAAGACATGAACCC
ATTGGAGTGTGTGGACAGATCATCCCATGGAACCTCCCTGCTGATGTTTGCCTGGAAA
ATAGCTCCAGCTTTGTGCTGTGGCAATACAGTAGTTATTAAGCCAGCAGAGCAAACACCA
CTCAGTGCCTACTACATGGGAGCCCTCATCAAGGAGGCTGGCTTTCCTCCCGGGTCATC
AATATTTTCCAGGATATGGGCCAACGGCTGGGGCAGCAATAGCTTCTCACATTGGCATA
GACAAGATTGCATTCACAGGGTCTACTGAGGTTGAAAGCTTATCCAAGAAGCAGCTGGA
AGAAGTAATTTGAAGAGAGTAAGTCTGGAACCTGGAGGCAAAAGTCTAATATTATTTT
GCTGATGCTGACTTGGACTATGCTGTGGAGCAGGCCACCCAGGGTGTGTTCTTCAATCAA
GGTCAGTGTGCTGCACTGCAGGCTCTCGCATCTTCGTGGAGGAGTCCATCTATGAGGAGTTT
GTGAGAAGAAGCGTGGAGCGGGCCAAGAGGCGCGTAGTGGGGAGTCCCTTTGACCCACC
ACTGAGCAGGGTCCCCAGATTGATAAGAAACAGTACAACAAGATCTTGAACTCATCCAG
AGTGGTGTGGCTGAGGGCGCCAAGCTGGAATGTGGAGGCAAAGGACTGGGCCGAAAGGGG
TTTTTCATTGAGCCCACAGTGTTTTCCAACGCTCACTGATGATATGCGGATTGCCAAGGAG
GAGATCTTTGGCCCTGTTTCAGAAATTTTGGATTTAAGACGATGGATGAAGTTATCGAA
AGAGCCAATAAAGTCAAGACTTTGGACTCGTAGCAGCTGTCTTTACTAATGACATCAACAAG
GCCCTCACAGTGTCTTCTGCAATGCAAGCTGGGACTGTTTGGATCAATTGTTACAATGCC
TTAAATGCCAGAGCCCTTTGGGGATTCAAGATGTCTGGAATGGGAGAGAAATGGGA
GAATTTGGCTTGCAGGAGTACTCAGAAGTTAAGACGGTGACAGTAAAGATCCCCCAGAAG
AACTCCTAA

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Clone variation with respect to NM\_170697.2



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<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_003888
<b>Insert Size:</b>	3400 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>OTI Annotation:</b>	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
<b>Components:</b>	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>	<u><a href="#">NM_003888.2</a></u> , <u><a href="#">NP_003879.2</a></u>
<b>RefSeq Size:</b>	3398 bp
<b>RefSeq ORF:</b>	1557 bp
<b>Locus ID:</b>	8854
<b>UniProt ID:</b>	<u><a href="#">O94788</a></u>
<b>Cytogenetics:</b>	15q21.3
<b>Domains:</b>	aldedh
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	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]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1).