

## Product datasheet for **SC321516**

### ALDH3A1 (NM\_000691) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH3A1 (NM_000691) Human Untagged Clone
Tag:	Tag Free
Symbol:	ALDH3A1
Synonyms:	ALDH3; ALDHIII
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene sequence for NM\_000691.3  
 CAGTTACCGGGAGAGGCTGTGTCAAAGGCGCCATGAGCAAGATCAGCGAGGCCGTGAAGC  
 GCGCCCGCGCCGCTTCAGCTCGGGCAGGACCCGTCGCTGCAGTTCGGATCCAGCAGC  
 TGGAGGCGCTGCAGCGCCTGATCCAGGAGCAGGAGCAGGAGCTGGTGGGCGCGCTGGCCG  
 CAGACCTGCACAAGAATGAATGGAACGCCTACTATGAGGAGGTGGTGTACGTCTAGAGG  
 AGATCGAGTACATGATCCAGAAGCTCCCTGAGTGGGCCGCGGATGAGCCCGTGGAGAAGA  
 CGCCCCAGACTCAGCAGGACGAGCTCTACATCCACTCGGAGCCACTGGGCGTGGTCCCTCG  
 TCATTGGCACCTGGAACACCCCTTCAACCTCACCATCCAGCCCATGGTGGGCGCCATCG  
 CTGCAGGGAACGCAAGTGGTCTCAAGCCCTCGGAGCTGAGTGAGAACATGGCGAGCTGC  
 TGGCTACCATCATCCCCAGTACCTGGACAAGGATCTGTACCCAGTAATCAATGGGGGTG  
 TCCCTGAGACCACGGAGCTGCTCAAGGAGAGGTTCCAGCATATCCTGTACACGGGAGCA  
 CGGGGGTGGGAAGATCATCATGACGGCTGCTGCCAAGCACCTGACCCCTGTCACGCTGG  
 AGCTGGGAGGGAAGAGTCCCTGCTACGTGGACAAGAACTGTGACCTGGACGTGGCCTGCC  
 GACGCATCGCTGGGGAAATTCATGAACAGTGGCCAGACCTGCGTGGCCCCAGACTACA  
 TCCTCTGTGACCCCTCGATCCAGAACCAATTGTGGAGAAGCTCAAGAAGTCACTGAAAG  
 AGTTCTACGGGGAAGATGCTAAGAAATCCCGGGACTATGGAAGAATCATTAGTCCCGGC  
 ACTTCCAGAGGGTATGGGCTGATTGAGGGCCAGAAGGTGGCTTATGGGGGCACCGGGG  
 ATGCCGCCACTCGCTACATAGCCCCACCATCCTCACGGACGTGGACCCCAAGTCCCGG  
 TGATGCAAGAGGAGATCTTCGGGCTGTGCTGCCATCGTGTGCTGCGCAGCCTGGAGG  
 AGGCCATCCAGTTCATCAACCAGCGTGAGAAGCCCTGGCCCTTACATGTTCTCCAGCA  
 ACGACAAGGTGATTAAGAAGATGATTGCAGAGACATCCAGTGGTGGGGTGGCGCCAACG  
 ATGTCATCGTCCACATCACCTTGCACTCTGTCCTTCGGGGCGTGGGAACAGCGGCA  
 TGGGATCCTACCATGGCAAGAAGAGCTTCGAGACTTCTCTCACCGCCGCTCTTGCTGG  
 TGAGGCCTCTGATGAATGATGAAGGCCTGAAGGTCAGATACCCCGGAGCCCGCCAAGA  
 TGACCCAGCACTGAGGAGGGTTGCTCCGCTGGCCTGGCATACTGTGTCCCATCGGAG  
 TGCGGACCACCCTCACTGGCTCTCCTGGCCCTGGGAGAATCGCTCCTGCAGCCCCAGCC  
 AGCCCCACTCCTGCTGACCTGCTGACCTGTGCACCCCCACTCCACATGGGCCAGG  
 CCTCACCATTCCAAGTCTCCACCCTTTCTAGACCAATAAAGAGACAAATACAATTTTCT  
 AACTCAGCAA  
 AACCCCG

- Restriction Sites:** Please inquire
- ACCN:** NM\_000691
- OTI Disclaimer:** 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).
- OTI Annotation:** 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.
- 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\\_000691.3](#), [NP\\_000682.3](#)

**RefSeq Size:** 1722 bp

**RefSeq ORF:** 1362 bp

**Locus ID:** 218

**UniProt ID:** [P30838](#)

**Cytogenetics:** 17p11.2

**Domains:** aldedh

**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:** Aldehyde dehydrogenases oxidize various aldehydes to the corresponding acids. They are involved in the detoxification of alcohol-derived acetaldehyde and in the metabolism of corticosteroids, biogenic amines, neurotransmitters, and lipid peroxidation. The enzyme encoded by this gene forms a cytoplasmic homodimer that preferentially oxidizes aromatic and medium-chain (6 carbons or more) saturated and unsaturated aldehyde substrates. It is thought to promote resistance to UV and 4-hydroxy-2-nonenal-induced oxidative damage in the cornea. The gene is located within the Smith-Magenis syndrome region on chromosome 17. Multiple alternatively spliced variants, encoding the same protein, have been identified. [provided by RefSeq, Sep 2008]  
Transcript Variant: This variant (2) differs in the 5' UTR compared to variant 1. Variants 1-3 encode the same isoform (1).