

Product datasheet for **SC319549**

ALDH4A1 (NM_170726) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH4A1 (NM_170726) Human Untagged Clone
Tag:	Tag Free
Symbol:	ALDH4A1
Synonyms:	ALDH4; P5CD; P5CDh
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_170726.1
 CCCGCTTCTAACCCGAGATGCTGCTGCCGGCGCCCGCTCCGCCGCCCTGCTGTCCC
 GCCCTGGACCGGGGCCGCTGCGGTGGAAGCACACCTCCTCCCTGAAGGTGGCAACG
 AGCCCGTCTTAGCCTTACGCAGGGCAGCCCTGAGCGAGATGCCCTGCAAAGGCCTTGA
 AGGACCTGAAGGGCCGGATGGAAGCCATCCCATGCGTGGTGGGGATGAGGAGGTGTGGA
 CGTCGGACGTGCAGTACCAAGTGTGCGCTTTTAAACCATGGACATAAGGTGGCAAGTTCT
 GTTATGCAGACAAGAGCCTGCTCAACAAAGCCATTGAGGCTGCCCTGGCTGCCCGAAAG
 AGTGGGACCTGAAGCCTATTGCAGACCGGGCCAGATCTTCTGAAGGGCCAGACATGC
 TGAGTGGCCCGCAGGGCTGAGATCCTCGCCAAGACCATGGTGGGACAGGGTAAGACCG
 TGATCCAAGCGGAGATTGACGCTGCAGCGGAACCTCATCGACTTCTCCGTTCAATGCCA
 AGTATGCGGTGGAGCTGGAGGGGACAGCCCATCAGCGTGCCCGGAGCACCAACAGCA
 CGGTGTACCGGGTCTGGAGGGCTTCGTGGCGGCCATCTCGCCCTTAACTTCACTGCAA
 TCGGCGGCAACCTGGCGGGGACCCGGCCCTGATGGGCAACGTGGTCTATGGAAGCCCA
 GTGACACTGCCATGCTGGCCAGCTATGCTGTCTACCGCATCCTTCGGGAGGCTGGCTGC
 CCCCCAACATCATCCAGTTTGTGCCAGCTGATGGGCCCTATTTGGGGACACTGTACCA
 GCTCAGAGCACCTCTGTGGCATCAACTTACAGGCAGTGTGCCACCTTCAAACACCTGT
 GGAAGCAGGTGGCCAGAACCTGGACCGGTTCCACACCTTCCCACGCCTGGCTGGAGAGT
 GCGGGCGAAAGAACTTCCACTTCGTGCACCGCTCGGCCGACGTGGAGAGCGTGGTGGAGC
 GGACCTCCGCTCAGCCTTCGAGTACGGTGGCCAGAAGTGTTCGCGTGTCTCGCGTCTCT
 ACGTGCCGCACTCGCTGTGGCCGAGATCAAAGGGCGGCTGCTGGAGGAGCACAGTCGGA
 TCAAAGTGGGCGACCCTGCAGAGGATTTTGGGACCTTCTTCTCTCAGTATTGATGCCA
 AGTCTTTGCCGTATCAAGAAGTGGCTGGAGCACGCACGCTCCTCACCCAGCCTCACCA
 TCCTGGCCGGGGCAAGTGTGATGACTCCGTGGGCTACTTTGTGGAGCCCTGCATCGTGG
 AGAGCAAGGACCCTCAGGAGCCCATCATGAAGGAGGAGATCTTCGGCCCTGTACTGTCTG
 TGTACGTCTACCCGGATGACAAGTACAAGGAGACGCTGCAGCTGGTTGACAGCACCACCA
 GCTATGGCCTCACGGGGCAGTGTCTCCAGGATAAGGACGTCGTGCAGGAGGCCACAA
 AGGTGCTGAGGAATGCTGCCGGCAACTTCTACATCAACGACAAGTCCACTGGCTCGATAG



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TGGGCCAGCAGCCCTTTGGGGGGGCCCGAGCCTCTGGAACCAATGACAAGCCAGGGGGCC
 CACACTACATCTGCGCTGGACGTGCGCCGAGGTCAAGGAGACACATAAGCCCTGG
 GGGACTGGAGCTACGCGTACATGCAGTGAGCCCTCTCGGGCTCCACCGTCCAGCTGTCT
 GTCCGTCCAGGTGGCCGACCTACTGCACAGACCCCACTCCAGCCCTCCACCCCTTCTT
 CATGCACAGCTGCCTTTCTATAATCCGGGCTTGACTCCCTTCTTACCAGTGTATTCTGGC
 CTCTCCCATGCCTCAGGCTCTGGTTTGAGATCGTGCTGGGGAGGAACATGGCCACTACCC
 CTTATCCCATCGGCCATGTGGGAGGTATGACCCGTGGTGCCTGGCAGGTTCTCCCTCTGCC
 CTCCACTGGGCCAGTGGCTCAGGGACCTGGGGAAAGGAGATGGAGCAGCTCTTGGGATC
 CTTTGGGGAAAAGGAGGCCATTCTGGGCCCTTGCCAAACCTCACCACTCACAGAGGCTC
 CTGGCCTTGATCCCTGCCCTCCAGGTGTCCAGGGTAAAGTGAACTCAGACTGACCTGT
 GGGGCACAGGGGGCACCAGCTGGCCTTGGCCTCTCTGGTCTGGGCTGTCTACCTTCTCA
 CTGTATCTTTGCCAGACCCACCTGGGCCAGTAGGCCCTGTCCCAGCCACACACCTTA
 GATGCTGGCATGCCTTACTCCAGGTGCCTGTGTTGGCCGAGGCCTGTGTATTCCCGGT
 CTGCACCACATGGCGGGTTGGGGGGCCGCTGGAGGCCACCTGCCAAGGCGTGGGATGGG
 ATGGTCTGCCGTTTAGGCCGTGATTCTGGAACCTTGGATGGCCTTCGTCTATGT
 CAGCCTTCCCTTTGATCCTCAGGCCCTACCTGTAGAGACCTCCACTCCTAGAGCCAGTCT
 CAGGGTCTGGGATTTCCCTGCAGGAGCTCAGCCACCACTGTGCCATGGTACACAGGCCA
 AGGCAGACATTGGCCCTCCCTTCTCCAGCCCCAGAGGCCTGGCCTTGGGTTTCGTGAGC
 ATGGGCCGAGGACGTTGCCTGTAGAATCCTCCTCTGCCTGGGAGTGGCTCTGTGTGGACC
 AGTCCCTCACTGGCCATTCTTTTTTTGACGCAGCAATCTGTGACCACGATTCTCCCA
 CAGATGCCTCCTGCTTGGATTCTGAGTGGTCAGAGATCTGTAAGCATGACTTTCAAGGA
 TGGTCTTAGGGGACTGTGAAAGTGTGGGTCTCCTCCAGGATGCCTGCATGGGACCC
 ACCCGGAGCTGGTGGCCATTCCCAAGTGCCACTGGCCATGGATGGGGGTGGGTGCT
 GGTGCCAGCTGGGCTGGGTGGGTTCTGTGTCCTCCAGGATATGTGTCAATTTCCCATG
 AGGGGCCGGGCCAGGTGGCTGGGTGGGGCACAGGCTGGAGTATTCTTAGTTCTACTGGT
 TCTACTGTGAGGTGGCAATGGGATTTGCTCAGATGCCACCAATAAAATGCCTGTTAC
 TAAAAAAAAAAAAAAAAAAAA

Restriction Sites:

Please inquire

ACCN:

NM_170726

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_170726.1 , NP_733844.1
RefSeq Size:	2147 bp
RefSeq ORF:	1692 bp
Locus ID:	8659
UniProt ID:	P30038
Cytogenetics:	1p36.13
Protein Families:	Druggable Genome
Protein Pathways:	Alanine, aspartate and glutamate metabolism, Arginine and proline metabolism, Metabolic pathways
Gene Summary:	<p>This protein belongs to the aldehyde dehydrogenase family of proteins. This enzyme is a mitochondrial matrix NAD-dependent dehydrogenase which catalyzes the second step of the proline degradation pathway, converting pyrroline-5-carboxylate to glutamate. Deficiency of this enzyme is associated with type II hyperprolinemia, an autosomal recessive disorder characterized by accumulation of delta-1-pyrroline-5-carboxylate (P5C) and proline. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene. [provided by RefSeq, Jun 2009]</p> <p>Transcript Variant: This variant (P5CDhS) differs in the 3' UTR compared to variant P5CDhL. Both variants P5CDhL and P5CDhS encode the same protein (isoform a).</p>