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Product datasheet for SC327568

ALDH4A1 (NM_001161504) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH4A1 (NM_001161504) Human Untagged Clone
Tag:	Tag Free
Symbol:	ALDH4A1
Synonyms:	ALDH4; P5CD; P5CDh
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

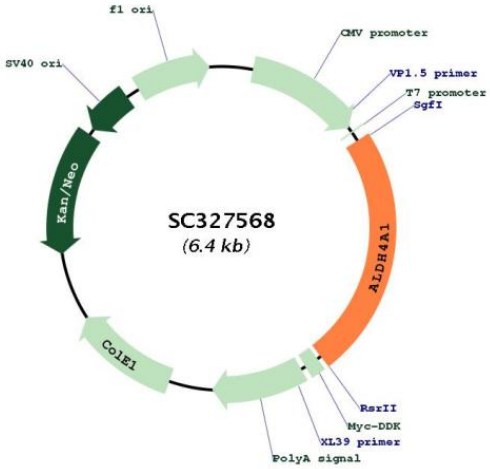
Fully Sequenced ORF:

>SC327568 representing NM_001161504.
Blue=Insert sequence Red=Cloning site Green=Tag(s)

GCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGAAGCCATCCCATGCGTGGTGGGGGATGAGGAGGTGTGGACGTCGGACGTGCAGTACCAAGTGTCG
CCTTTTAACCATGGACATAAGGTGGCCAAGTTCTGTTATGCAGACAAGAGCCTGCTCAACAAAGCCATT
GAGGCTGCCCTGGCTGCCCGGAAAGAGTGGGACCTGAAGCCTATTGCAGACCGGGCCCAGATCTTCCTG
AAGGCGGCAGACATGCTGAGTGGGCCGCGCAGGGCTGAGATCCTCGCCAAGACCATGGTGGGACAGGGT
AAGACCGTGATCCAAGCGGAGATTGACGCTGCAGCGGAACTCATCGACTTCTTCCGGTTCAATGCCAAG
TATGCGGTGGAGCTGGAGGGGCAGCAGCCCATCAGCGTGCCCCCGAGCACCAACAGCACGGTGTACCGG
GGTCTGGAGGGCTTCGTGGCGGCCATCTCGCCCTTTAACTTCACTGCAATCGGCGGCAACCTGGCGGGG
GCACCGGCCCTGATGGGCAACGTGGTCCTATGGAAGCCCAGTGACACTGCCATGCTGGCCAGCTATGCT
GTCTACCGCATCCTTCGGGAGGCTGGCCTGCCCCCCAACATCATCCAGTTTGTGCCAGCTGATGGGCCC
CTATTTGGGGACACTGTCACCAGCTCAGAGCACCTCTGTGGCATCAACTTCACAGGCAGTGTGCCCACC
TTCAAACACCTGTGGAAGCAGGTGGCCCAGAACCTGGACCGGTTCCACACCTTCCCACGCCTGGCTGGA
GAGTGCGGCGGAAAGAACTTCCACTTCGTGCACCGCTCGGCCGACGTGGAGAGCGTGGTGAGCGGGACC
CTCCGCTCAGCCTTCGAGTACGGTGGCCAGAAGTGTTCCGCGTGCTCGCGTCTCTACGTGCCGCACTCG
CTGTGGCCGCAGATCAAAGGGCGGCTGCTGGAGGAGCACAGTCGGATCAAAGTGGGCGACCCTGCAGAG
GATTTTGGGACCTTCTTCTCTGCAGTGATTGATGCCAAGTCCTTTGCCCGTATCAAGAAGTGGCTGGAG
CACGCACGCTCCTCACCCAGCCTCACCATCCTGGCCGGGGGCAAGTGTGATGACTCCGTGGGCTACTTT
GTGGAGCCCTGCATCGTGGAGAGCAAGGACCCTCAGGAGCCCATCATGAAGGAGGAGATCTTCGGGCCT
GTACTGTCTGTGTACGTCTACCCGGATGACAAGTACAAGGAGACGCTGCAGCTGGTTGACAGCACCACC
AGCTATGGCCTCACGGGGGCAGTGTTCTCCCAGGATAAGGACGTCGTGCAGGAGGCCACAAAGGTGCTG
AGGAATGCTGCCGGCAACTTCTACATCAACGACAAGTCCACTGGCTCGATAGTGGGCCAGCAGCCCTTT
GGGGGGGCCCGAGCCTCTGGAACCAATGACAAGCCAGGGGGCCCACACTACATCCTGCGCTGGACGTCG
CCGCAGGTCATCAAGGAGACACATAAGCCCCTGGGGGACTGGAGCTACGCGTACATGCAGTGA
AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGAT
ATCCTGGATTACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-RsrII

Plasmid Map:



ACCN: NM_001161504

Insert Size:	1512 bp
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_001161504.1
RefSeq Size:	3259 bp
RefSeq ORF:	1512 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
MW:	55.1 kDa
Gene Summary:	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] Transcript Variant: This variant (3) has an alternate 5' exon, compared to variant P5CDhL, resulting in a downstream AUG start codon. The resulting isoform (b) has a shorter N-terminus, compared to isoform a.