

Product datasheet for **RC200648**

Aldehyde dehydrogenase 10 (ALDH3A2) (NM_001031806) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aldehyde dehydrogenase 10 (ALDH3A2) (NM_001031806) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aldehyde dehydrogenase 10
Synonyms:	ALDH10; FALDH; SLS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC200648 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGAGCTCGAAGTCCGGCGGGTCCGACAGCGCTTCTGTCCGGCCGGTCCGACCTCTCGGGTTTCGGC
 TGCAGCAGCTGGAGGCCCTGCGGAGGATGGTGCAGGAGCGGAGAAGGATATCCTGACGGCCATCGCCGC
 CGACCTGTGCAAGAGTGAATTCAATGTGTACAGTCAGGAAGTCATTACTGTCCTTGGGAAATTGATTTT
 ATGCTTGAGAATCTTCTGAATGGGTTACTGCTAAACCAGTTAAGAAGAAGCTGCTCACCATGCTGGATG
 AGGCCTATATTCAGCCACAGCCTCTGGGAGTGGTCTGATAATCGGAGCTTGAATTACCCCTTCGTTCT
 CACCATTAGCCACTGATAGGAGCCATCGCTGCAGGAAATGCTGTGATTATAAAGCCTTCTGAAGTGA
 GAAAATACAGCCAAGATCTTGGCAAAGCTTCTCCCTCAGTATTTAGACCAGGATCTCTATATTGTTATTA
 ATGGTGGTGTGAGGAAACCACGGAGCTCTGAAGCAGCGATTTGACCACATTTTCTATACGGGAAACAC
 TCGCGTTGGCAAATGTCATGGAAGCTGCTGCCAAGCATCTGACCCCTGTGACTCTTGAAGTGGGAGGG
 AAAAGTCCATGTTATATTGATAAAGATTGTGACCTGGACATTGTTTGCAGACGCATAACCTGGGGAAAT
 ACATGAATTGTGGCCAAACCTGCATTGCACCCGACTATATTCTCTGTGAAGCATCCCTCCAAATCAAAT
 TGTATGGAAGATTAAGGAAACAGTGAAGGAATTTTATGGAGAAAAATAAAAAGAGTCTCCTGATTATGAA
 AGGATCATCAATCTTCGTCATTTAAGAGGATACTAAGTTTGCTTGAAGGACAAAAGATAGCTTTTGGTG
 GGGAGACTGATGAGGCCACACGCTACATAGCCCAACAGTACTTACCGATGTTGATCCTAAAACCAAGGT
 GATGCAAGAAGAAATTTTGGACCAATCTTCCAATAGTGCCTGTGAAAAATGTAGATGAGGCCATAAAT
 TTCATAAATGAACGTGAAAAGCCTCTGGCTCTTTATGTATTTTCGCATAACCATAAGCTCATCAAACGGA
 TGATTTGATGAGACATCCAGTGGAGGTGCACAGGCAATGACGTCATTATGCACTTCACGCTCAACTCTTT
 CCCATTTGGAGGAGTGGGTTCCAGTGGGATGGGAGCTTATCACGGAAAACATAGTTTTGATACTTTTTCT
 CATCAGCGTCCCTGTTTATTA AAAAGTTTAAAGAGAGAAGGTGCTAACAACTCAGATATCTCCCAACA
 GCCAGTCAAAGGTGGATTGGGAAAATTTTTCTCTTGAACGGTTCAACAAAGAAAACTCGGTCTCCT
 GTTGCTCACTTCTGGGTATTGTAGCCGCTGTGCTTGTCAAGAAATACCAAGCTGTGCTGAGGAGAAAAG
 GCCCTGTTGATTTTTCTGGTAGTTCACAGACTGCGTTGGTCCAGTAAGCAGAGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC200648 protein sequence
 Red=Cloning site Green=Tags(s)

MELEVRRVRQAFLSGRSRPLRFRLQQLALRRMVQEREKDI LTAIAADLCKSEFNVSQEVITVLGEIDF
 MLENLPEWVTAKPVKKNVLTMLDEAYIQPQLGVVLIIGAWNYPFVLTIQPLIGAIAGNAVIIKPSLS
 ENTAKILAKLLPQYLDQDLYIVINGVEETTELLKQRFDFHIFTGNTAVGKIVMEAAKHLTPVTLELGG
 KSPCYIDKDCDLDIVCRITWGYMNCGQTCIAPDYILCEASLQNIQVWKIKETVKEFYGENIKESPDYE
 RIINLRHFKRILSLEGGQKIAFGGETDEATRYIAPTDLTDVDPKTKVMQEEIFGPILPVPKVNDEAIN
 FINEREKPLALYVFSHNHKLIKRMIDETSSGGVTGNDVIMHFTLNSFPFGVGVSSGMGAYHGKHSFDTFS
 HQRPCLLKSLKREGANKLRYPPNSQSKVDWGKFFLLKRFNKEKLGLLLLTFLGIVA AVLVKKYQAVLRK
 ALLIFLVVHRLRWSSKQR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6399_g02.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001031806

ORF Size: 1524 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001031806.2](#)

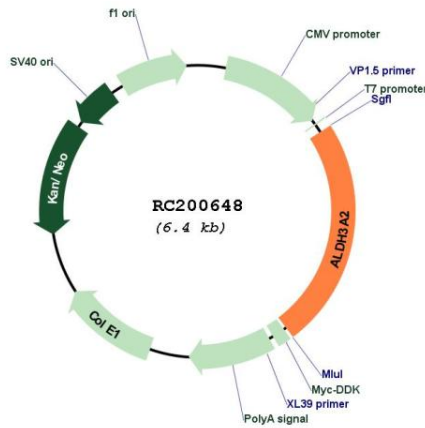
RefSeq Size: 3823 bp

RefSeq ORF: 1527 bp

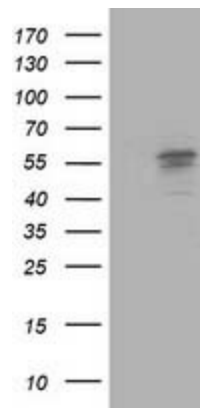
Locus ID: 224

UniProt ID: [P51648](#)
Cytogenetics: 17p11.2
Protein Families: Druggable Genome, Transmembrane
Protein Pathways: Arginine and proline metabolism, Ascorbate and aldarate metabolism, beta-Alanine metabolism, Butanoate metabolism, Fatty acid metabolism, Glycerolipid metabolism, Glycolysis / Gluconeogenesis, Histidine metabolism, Limonene and pinene degradation, Lysine degradation, Metabolic pathways, Propanoate metabolism, Pyruvate metabolism, Tryptophan metabolism, Valine, leucine and isoleucine degradation
MW: 57.7 kDa
Gene Summary: Aldehyde dehydrogenase isozymes are thought to play a major role in the detoxification of aldehydes generated by alcohol metabolism and lipid peroxidation. This gene product catalyzes the oxidation of long-chain aliphatic aldehydes to fatty acid. Mutations in the gene cause Sjogren-Larsson syndrome. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

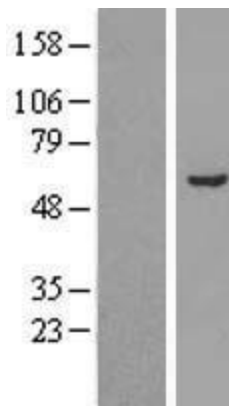
Product images:



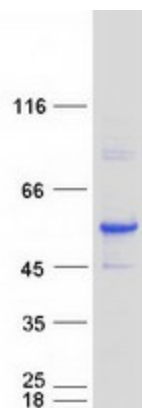
Circular map for RC200648



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ALDH3A2 (Cat# RC200648, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ALDH3A2(Cat# [TA503256]). Positive lysates [LY422196] (100ug) and [LC422196] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY422196]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200648 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ALDH3A2 protein (Cat# [TP300648]). The protein was produced from HEK293T cells transfected with ALDH3A2 cDNA clone (Cat# RC200648) using MegaTran 2.0 (Cat# [TT210002]).