

Product datasheet for **RC224951**

ALDH1L2 (NM_001034173) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH1L2 (NM_001034173) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ALDH1L2
Synonyms:	mtFDH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC224951 representing NM_001034173
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGCGGGCGGGCAGCCAGGCGCTCCGGCGCTTCTCCACTGGCCGGGTTTATTTCAAAAACAAGCTGA
 AGTTGGCACTAATTGGCCAGAGCCTCTTTGGACAAGAAGTCTATAGCCACCTCCGCAAAGAGGGCCACCG
 AGTAGTAGGGGTGTTACAGTTCAGACAGAGGATGAAAAAGCTGACCCTCTGGCTTTGGCTGCAGAGAAA
 GATGGGACCCCTGTGTTCAAGCTTCTAAATGGAGGGTCAAGGGCAAGACCATCAAAGAAGTGGCAGAAG
 CCTACAGATCCGTGGGTGCAGAGCTAAATGTGCTCCCTTCTGCACTCAGTTCATCCCATGGATATAAT
 TGATAGTCAAAGCACGGCTCTATCATTATCACCCATCCATCCTGCCAGGCACAGAGGAGCCTCTGCT
 ATCAATTGGACTTAATTATGGGAGATAAGAAAGCTGGGTTTTCTGTTTTCTGGGCTGATGATGGCTTGG
 ATACAGGACCCATCCTTCTCAGAGATCATGTGATGTTGAACCAATGATACAGTGGATGCACCTTTATAA
 TCGGTTTTCTTTTCTGAAGGAATCAAGGCCATGGTAGAAGCTGTCCAACCTCATAGCTGATGAAAAAGCT
 CCTCGTATACCCAGCCAGAAGAAGGGCAACATATGAAGGTATCCAGAAAAAGGAAAATGCTGAGATTT
 CTTGGGACCAGTCTGCCGAAGTTTTACATAACTGGATTGAGGTCATGATAAAGTCCCTGGAGCTTGGAC
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 CCACTGGAAATTAAGGTGCCAAGAAGCCTGGTCTCGTTACCAAAAAATGGACTTGTCTTTTTGGTAACG
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 GCTCAATGGATGTTGCCAGGCTGGTTGAAGAGATCAGACAGAAATGGTGGGCTCAGTGCAGAATGA
 AGATGCTATATGGCCACCAAGTTTGAAGGCTTTATCCAAAAGGTGCTGAGGAAAAGTGAAGAGAGAAGAT
 CAAGAGGTGGAGCTGGTTGATGATTATATTTCAAAGGAGGTCAATGAAATCATGGTAAAAATGCCATACC
 AGTGTTCATAAATGGACAGTTCACAGATGCAGACGATGGAAAGACTTACGACACTATCAACCAACAGA
 TGGATCTACAATATGCAAAGTATCCTACGCTTCTTTGGCGGATGTTGATAAAGCAGTAGCAGCAGCAAAA
 GATGCTTTTAAAACGGTGAATGGGGAAGAATGAATGCAAGAGAAAGAGGAAGATTGATGTATAGACTTG
 CAGACCTACTGGAAGAGAACCAAGAAGAGCTGGCAACTATTGAAGCCCTTGATTCAGGGGCTGTCTATAC
 CTTGGCCCTGAAGACACACATTGGAATGTCTGTGCAAACATTGAGATATTTGCTGGCTGGTGCACAAA
 ATTCAGGGTCTACTATTCCAATCAACCAGGCCGCTCCAATCGCAATCTGACCTTCACCAAGAAAGAGC
 CACTCGGTGTCTGTGCCATTATTATCCCTGGAAGTACCCGCTGATGATGCTGGCATGGAAGAGTGTCTGC
 GTGTTTGGCAGCAGGCAATACCTTAGTGCTCAAGCCAGCACAGGTCACGCCCTTGACTGCTTTGAAGTTT
 GCAGAAGTGTCTGTGAAAGCAGGCTTTCCAAAAGGGGTCATCAACATCATTCCAGGCTCAGGTGGCATAG
 CAGGACAACGTCTGTCTGAACATCCTGACATCCGCAAAGTGGTTTCACTGGATCCACTCCTATTGGCAA
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 CTTATAATATTTAATGACTGTGAAGTGGCAAGGCTGTGCGAATGGGCATGGGAGCAGTATTTTTCAACA
 AAGGAGAGAAGTATTGCTGCTGGGCGGTTGTTCTGGAAGAATCCATCCACGACGAATTTGTGACAAG
 AGTGGTAGAAGAAATTAAGAGATGAAAATGGTGTACTCCACTTGACAGATCCACTGATCATGGGCCCAA
 AATCATAAGGCTCATCTGAAAAGCTGCTGCAATACTGTGAAAGTGGAGTGAAGAAGGGCCACTTTGG
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 AGATGTGGCGGCCCATTTGGCGGAGTTAAACAATCTGGCTTTGGAAAAGACTTAGGTGAGGAAGCTCTA
 AATGAATATCTCAAACCAAGACGGTGACTGGAATAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAAGTTTAA

Protein Sequence: >RC224951 representing NM_001034173
 Red=Cloning site Green=Tags(s)

MLRRGSQALRRFSTGRVYFKNLKLALIGQSLFGQEVYSHLRKEGHRVVGVTVPDKDGKADPLALAAEK
 DGTPVFKLPKWRVKGKTIKEVAEAYRSVGAELNVLPFCTQFIPMDIIDSPKHGSIYHPSILPRHRGASA
 INWTLIMGDKKAGFSVFWADDGLDTGPILLQRSCDVEPNDDVDALYNRFLFPEGIKAMVEAVQLIADGKA
 PRIPQPEEGATYEGIQKKENAEISWDQSAEVLHNWIRGHDKVPGAWTEINGQMVTFYGSTLLNSSVPPGE
 PLEIKGAKKPGLVTKNGLVLFNGDGKALTVRNLQFEDGKMIPASQYFSTGETSVVELTAEVVKVAETIKV
 IWAGILSNVPIIEDSTDFFKSGASSMDVARLVEEIRQKCGGLQLQNEVDVYMATKFEFGIQKVVRLRGED
 QEVELVVDYISKEVNEIMVKMPYQCFINGQFTDADDGKTYDTINPTDGGSTICKVSYASLADVDKAVAAA
 DAFENGEWGRMNARERGLMYRLADLLEENQEELATIEALDSGAVYTLALKTHIGMSVQTFRYFAGWCDK
 IQGSTIPINQARPNRNLTFKKEPLGVCAIIPWNYPLMMLAWKSAACLAAGNTLVLKPAQVTPLTALKF
 AELSVKAGFPKGVINIIPGSGGIAGQRLSEHPDIRKLGFTGSTPIGKQIMKSCAVSNLKKVSLGKSP
 LIIFNDCELDKAVRMGMGAVFFNKGENCIAAGRLFVEESIHFVTRVVEEIKMKIGDPLDRSTDHGPQ
 NHKAHLEKLLQYCETGVKEGATLVYGGQVQRPGFMEPTVFTDVEDYMLAKEESFGPIMVISKFQNGD
 IDGVLQRANSTEYGLASGVFTRDINKAMYVSEKLEAGTVFINTYNKTDVAAPFGGVKQSGFGKDLGEEAL
 NEYLKTKTVTLEY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8044_h01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



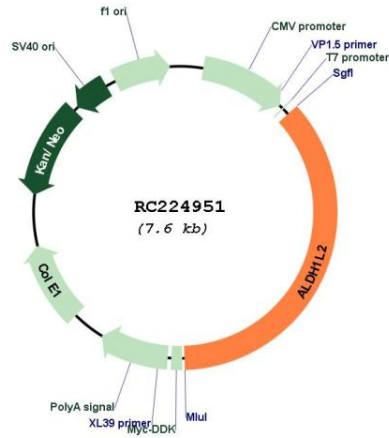
* The last codon before the Stop codon of the ORF

ACCN: NM_001034173

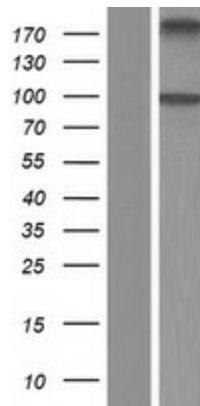
ORF Size: 2769 bp

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:	<ol style="list-style-type: none">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_001034173.4
RefSeq Size:	2796 bp
RefSeq ORF:	2772 bp
Locus ID:	160428
UniProt ID:	Q3SY69
Cytogenetics:	12q23.3
Protein Families:	Druggable Genome
MW:	101.6 kDa
Gene Summary:	This gene encodes a member of both the aldehyde dehydrogenase superfamily and the formyl transferase superfamily. This member is the mitochondrial form of 10-formyltetrahydrofolate dehydrogenase (FDH), which converts 10-formyltetrahydrofolate to tetrahydrofolate and CO ₂ in an NADP(+)-dependent reaction, and plays an essential role in the distribution of one-carbon groups between the cytosolic and mitochondrial compartments of the cell. Alternatively spliced transcript variants have been found for this gene.[provided by RefSeq, Oct 2010]

Product images:



Circular map for RC224951



Western blot validation of overexpression lysate (Cat# [LY421958]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224951 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).