

Product datasheet for **RC216863**

ALDH8A1 (NM_170771) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH8A1 (NM_170771) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ALDH8A1
Synonyms:	ALDH12; DJ352A20.2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC216863 representing NM_170771
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCTGGAACAAACGCACCTTTTGTATGCTGAAAACTTCATAGATGAAAAATTTTACCTTGTAGCTCAT
 ATATAGATTCTTACGACCCATCAACAGGGGAAGTGATTGCAGAGTGCCAAATAGTGAAAAAGACGAGAT
 CGAAGCCGCGGTCAAGGCCGCCAGAGAAGCCTTCCAGCTGGTCATCCCGCAGCCCCCAGGAGCGCTCA
 CGGGTCTGAACCAGGTGGCGGATTTGCTGGAGCAGTCCCTGGAGGAGTTTCCCAGGCCGAGTCTAAAG
 ACCAAGGGAAAACCTTAGCACTGGCAAGAACCATGGACATTCCCCGGTCTGTGCAGAACTCAGGTTCTT
 CGCTTCTCCAGCTGCACCACAGTGCAGTGCACGCAGATGGACCACCTGGGCTGCATGCACTACACG
 GTGCGGGCCCCGGTGGGAGTCGCTGGTCTGATCAGCCCCGGAATTTGCCACTCTACTTGTGACCTGGA
 AGATAGCTCCAGCGATGGCTGCAGGGAACACTGTGATAGCCAAGCCAGTGAAGTCACTTCACTGACTGC
 GTGGATGTTGTGAAACTCCTGGATAAAGCAGGTGTTCCACCAGGTGTGGTCAATATTGTGTTTGAACC
 GGGCCCAGGGTGGGTGAGGCCCTGGTGTCCCACCCAGAGGTGCCCTGATCTCCTCACCGGAGCCAGC
 CCACCGCTGAGCGGATCACCCAGCTGAGCGCTCCCCACTGCAAAAAGCTCTCCCTGGAGCTGGGGGGCAA
 GAATCCTGCCATCATCTTTGAGGACGCCAACCTGGATGAGTGCATTCCGCAACCCTCAGGTCCAGCTTT
 GCCAACAGGTGAGAAGTTACGTCAGAGAGCTTTGCTGAAGGTGCCAAATTTGGTGCCTGAGGGAG
 TGGATAAGTTGAGCCTCCCTGCCAGGAACCAGGACGGCTACTTTATGCTTCCACGGTGATAACAGACAT
 TAAGGATGAATCCTGCTGCATGACGGAAGAGATATTTGGTCCAGTGAAGTGTGTCGTCCTTTGATAGT
 GAAGAGGAGGTGATTGAAAGAGCCAACAACGTTAAGTATGGGCTGGCGGTACCGTGTGGTCCAGCAATG
 TGGGGCGGTCCACCGGGTGGCTAAGAAGCTGCAGTCTGGCTGGTCTGGACCAACTGCTGGCTCATCAG
 GGAGCTGAACCTTCCTTTCGGGGGATGAAGAGTTCTGGAATAGGTAGAGAGGGAGCCAAGGACTCTTAC
 GACTTCTTCACTGAGATCAAACCATCACCGTTAAACAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC216863 representing NM_170771
 Red=Cloning site Green=Tags(s)

MAGTNALLMLENFIDGKFLPCSSYIDSYPSTGEVYCRVPSNGKDEIEAAVKAAREAFPSWSSRSPQERS
 RVLNQVADLLEQSLEEFQAESKDQKTLALARTMDIPRSVQNFRRFASSSLHHTSECTQMDHLGCMHYT
 VRAPVGVAGLISPWNPLPYLLTWKIAPAMAAGNTVIAKPSELTSVTAWMLCKLLDKAGVPPGVVNI VFGT
 GPRVGEALVSHPEVPLISFTGSQPTAERITQLSAPHCKKLSLELGGKNPAIIFEDANLDECIPATVRSSF
 ANQVRSYVKRALAEGAQIWCGEVDKLSLARNQAGYFMLPTVITDIKDESCMTEEIFGPVTCVVPFDS
 EEEVIERANNVYGLAATVWSSNVGRVHRVAKKLQSLVWNTCWLIRELNL PFGGMKSSGIGREGAKDSY
 DFFTEIKTITVKH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8059_f01.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:

ACCN: NM_170771

ORF Size: 1299 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.

RefSeq: [NM_170771.3](#)
RefSeq Size: 2387 bp

RefSeq ORF: 1302 bp

Locus ID: 64577

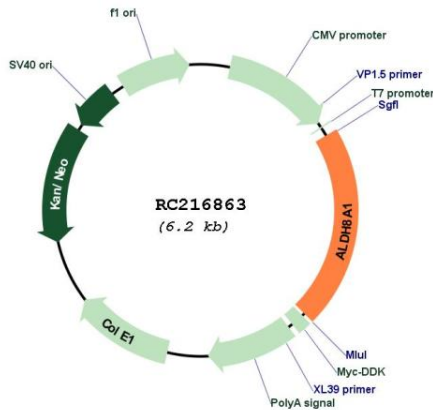
UniProt ID: [Q9H2A2](#)
Cytogenetics: 6q23.3

Protein Families: Druggable Genome

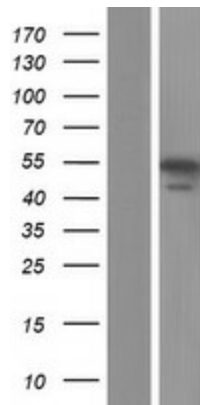
MW: 47.1 kDa

Gene Summary: This gene encodes a member of the aldehyde dehydrogenase family of proteins. The encoded protein has been implicated in the synthesis of 9-cis-retinoic acid and in the breakdown of the amino acid tryptophan. This enzyme converts 9-cis-retinal into the retinoid X receptor ligand 9-cis-retinoic acid, and has approximately 40-fold higher activity with 9-cis-retinal than with all-trans-retinal. In addition, this enzyme has been shown to catalyze the conversion of 2-aminomuconic semialdehyde to 2-aminomuconate in the kynurenine pathway of tryptophan catabolism. [provided by RefSeq, Jul 2018]

Product images:



Circular map for RC216863



Western blot validation of overexpression lysate (Cat# [LY406874]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216863 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).