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Product datasheet for RC238705

ALDH6A1 (NM_001278593) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH6A1 (NM_001278593) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ALDH6A1
Synonyms:	MMSADHA; MMSDH
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

View online »

ORF Nucleotide Sequence:

>RC238705 representing NM_001278593
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGCGCTATTGGCGGCGGCGGCAGTGCGAGCCCGGATCCTGCAGGTTTCTTCCAAGGTGAAATCCA
GTCCCACCTGGTATTCAGCATCTTCCTTCTCTTCTTCAGTGCCAACTGTAAAGCTCTTCATTGGTGGGAA
ATTCGTTGAATCCAAAAGTGACAAATGGATCGATATCCACAACCCAGCCACCAATGAGGTCATTGGTCGG
GTCCCTCAGGCCACCAAGGCAGAAATGGATGCAGCCATTGCTTCCTGCAAACGTGCTTTTCCTGCATGGG
CAGACACTTCAGTATTAAGCCGCCAGCAGAAAGAAATTGCCAAGTTAATCACATTGGAACAAGGGAAGAC
CCTAGCTGATGCTGAAGGAGATGTATTTCGAGGCCTTCAGGTGGTTGAGCATGCCTGTAGTGTGACATCC
CTCATGATGGGAGAGACCATGCCATCCATCACCAAAGACATGGACCTTTATTCCTACCGTCTGCCTCTGG
GAGTGTGTGCAGGCATTGCTCCATTCAATTTTCCTGCCATGATCCCCCTTTGGATGTTTCCCATGGCCAT
GGTGTGTGGAAATACCTTCCTAATGAAACCATCTGAGCGAGTCCCTGGAGCAACTATGCTTCTTGCTAAG
TTGCTCCAGGATTCTGGTGCCCCTGATGGAACATTAAACATCATCCATGGACAGCATGAAGCTGTAAATT
TTATTTGCGATCATCCGGACATCAAAGCAATCAGCTTTGTGGGATCCAACAAGGCAGGAGAGTATATCTT
CGAGAGAGGATCAAGACATGGCAAGAGGGTTCAAGCCAATATGGGAGCCAAGAACCATGGGGTAGTCATG
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TATGACCTGTTACAAAGAGGAGATTTTTGGTCCAGTTCTTGTGGTTCTGGAGACAGAAACATTGGATGAA
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CTCGGAAATATGCCCACTTGGTGGATGTTGGACAGGTGGGAGTGAATGTCCCCATTCCAGTGCCTTTGCC
AATGTTCTCATTCACCGGCTCTCGATCCTCCTTCAGGGGAGACACCAATTTCTATGGCAAACAGGGCATC
CAATTCTACACTCAGTTAAAGACCATTACTTCTCAGTGGAAAGAAGAAGATGCTACTCTTTCCTCACCTG
CTGTTGTCATGCCTACCATGGGCCGT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

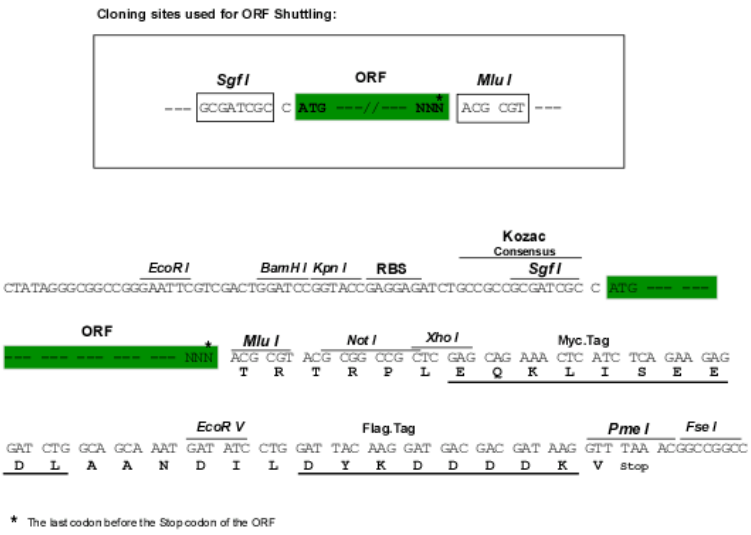
>RC238705 representing NM_001278593
Red=Cloning site Green=Tags(s)

MAALLAAAAVRARILQVSSKVKSSPTWYSASSFSSSVPTVKLFIGGKFVESKSDKWIDIHNPATNEVIGR
VPQATKAEMDAAIASCKRAFPAWADTSVLSRQQKEIAKLITLEQGKTLADAEGDVFRGLQVVEHACSVTS
LMMGETMPSITKDMDLYSYRLPLGVCAGIAPFNFPAMIPLWMFPMAMVCGNTFLMKPSERVPGATMLLAK
LLQDSGAPDGTLNIIHGQHEAVNFICDHPDIKAISFVGSNKAGEYIFERGSRHGKRVQANMGAKNHGVVM
PDANKENTLNQLVGAAFGAAGQRCMALSTAVLVGEAKKWLPELVEHAKNLRVNAGDQPGADLGPLITPQA
KERVCNLIDSGTKEGASILLDGRKIKVKGYENGNFVGPTIISNVKPNMTCYKEEIFGPVLVVLETETLDE
AIQIVNNNPYGNGTAIFTTNGATARKYAHLVDVGQVGVNVPIPVPLPMFSFTGSRSSFRGDTNFYGKQGI
QFYTQLKTITSQWKEEDATLSSPAVVMPTMGR

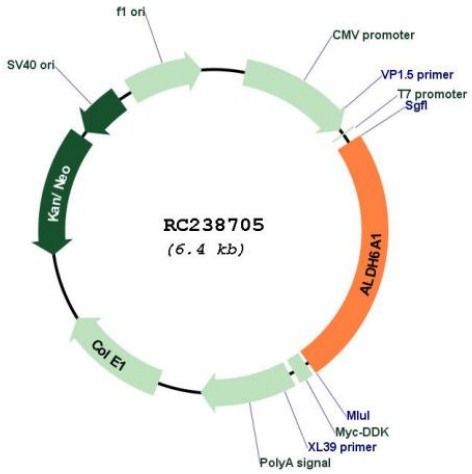
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001278593
ORF Size:	1566 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_001278593.2
RefSeq Size:	4662 bp
RefSeq ORF:	1569 bp
Locus ID:	4329
UniProt ID:	Q02252
Cytogenetics:	14q24.3
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Inositol phosphate metabolism, Metabolic pathways, Propanoate metabolism, Valine, leucine and isoleucine degradation
MW:	56.7 kDa
Gene Summary:	This gene encodes a member of the aldehyde dehydrogenase protein family. The encoded protein is a mitochondrial methylmalonate semialdehyde dehydrogenase that plays a role in the valine and pyrimidine catabolic pathways. This protein catalyzes the irreversible oxidative decarboxylation of malonate and methylmalonate semialdehydes to acetyl- and propionyl-CoA. Methylmalonate semialdehyde dehydrogenase deficiency is characterized by elevated beta-alanine, 3-hydroxypropionic acid, and both isomers of 3-amino and 3-hydroxyisobutyric acids in urine organic acids. Alternate splicing results in multiple transcript variants. [provided by RefSeq, Jun 2013]