

## Product datasheet for **RC237865**

### **ALDH6A1 (NM\_001278594) Human Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** ALDH6A1 (NM\_001278594) 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  
**ORF Nucleotide Sequence:** >RC237865 representing NM\_001278594  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGATGGGAGAGACCATGCCATCCATCACCAAAGACATGGACCTTTATTCCTACCGTCTGCCTCTGGGAG  
TGTGTGCAGGCATTGCTCCATTCATTTTCTGCCATGATCCCCCTTTGGATGTTTCCCATGGCCATGGT  
GTGTGAAATACCTTCTAATGAAACCATCTGAGCGAGTCCCTGGAGCAACTATGCTTCTTGCTAAGTTG  
CTCCAGGATTCTGGTGCCCTGATGGAACATTAACATCATCCATGGACAGCATGAAGCTGTAAATTTTA  
TTTGCGATCATCCGGACATCAAAGCAATCAGCTTTGTGGGATCCAACAAGGCAGGAGAGTATATCTTCGA  
GAGAGGATCAAGACATGGCAAGAGGGTTCAAGCCAATATGGGAGCCAAGAACCATGGGGTAGTCATGCCA  
GATGCCAATAAGGAAAATACCCTGAACCAGCTGGTTGGGGCAGCATTTGGAGCTGCTGGTCAGCGCTGCA  
TGGCTCTTTCAACAGCAGTCCTTGTGGGAGAAGCCAAGAAGTGGCTGCCAGAGCTGGTGGAGCATGCCAA  
AAACCTGAGAGTCAATGCAGGAGATCAGCCTGGAGCTGATCTTGGCCCTCTGATCACTCCCAGGCCAAA  
GAGCGAGTCTGTAATCTGATTGATAGTGAACAAGGAGGGAGCTCCATCCTTCTTGATGGACGAAAAA  
TTAAAGTGAAAGGCTATGAAAATGGCAACTTTGTTGGACCAACCATCATCTCGAATGTCAAGCCAATAT  
GACCTGTTACAAAGAGGAGATTTTTGGTCCAGTCTTGTGGTTCTGGAGACAGAAACATTGGATGAAGCC  
ATCCAGATTGTAATAACAACCCATATGGAATGGAAGTCCATCTTACCACCAATGGAGCCACTGCTC  
GGAAATATGCCCACTTGGTGGATGTTGGACAGGTGGGAGTGAATGTCCCCATTCCAGTGCCTTTGCCAAT  
GTTCTCATTACCGGCTCTCGATCCTCCTCAGGGGAGACACCAATTTCTATGGCAACAGGGCATCCAA  
TTCTACACTCAGTTAAAGACCATTACTTCTCAGTGAAAGAAGAAGATGCTACTCTTCTCACCTGCTG  
TTGTCATGCTACCATGGGCCGT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC237865 representing NM\_001278594  
Red=Cloning site Green=Tags(s)

MMGETMPSITKMDL LSYRLPLGVCAGIAPFNFPAMIPLWMFPMAMVCGNTFLMKPSERVPGATMLLAKL  
 LQDSGAPDGLNI IHGQHEAVNFICDHPDIKAI SFVGSNKAGEYIFERGSRHGKRVQANMGAKNHGVVMP  
 DANKENTLNQLVGA AFGAAGQRCMALSTAVLVGEAKKWLPELVEHAKNLRVNAGDQPGADLGPLITPQAK  
 ERVCNLIDSGTKEGASILLDGRKIKVKG YENGFVGTIISNVKPNMTCYKEEIFGPVLVLETETLDEA  
 IQIVNNNPYGNGT AIFTTNGATARKY AHLVDVGQGVNVPIPVPLPMFSFTGSRSSFGRD TNFYGKQGIQ  
 FYTQLKTI TSQWKEEDATLSSPAVVMPTMGR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

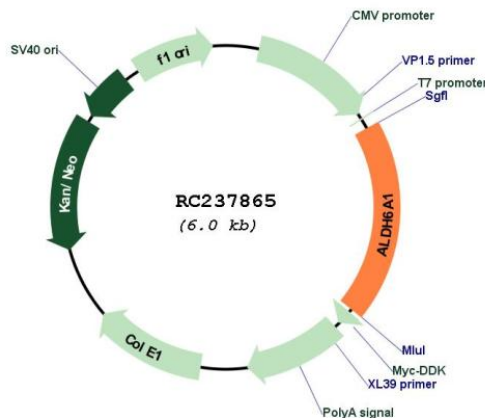
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_001278594

<b>ORF Size:</b>	1143 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_001278594.2</a>
<b>RefSeq Size:</b>	4864 bp
<b>RefSeq ORF:</b>	1146 bp
<b>Locus ID:</b>	4329
<b>Cytogenetics:</b>	14q24.3
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Inositol phosphate metabolism, Metabolic pathways, Propanoate metabolism, Valine, leucine and isoleucine degradation
<b>MW:</b>	41.6 kDa
<b>Gene Summary:</b>	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]