

## Product datasheet for **RG237865**

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

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH6A1 (NM_001278594) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALDH6A1
Synonyms:	MMSADHA; MMSDH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG237865 representing NM_001278594. Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTT TAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGATGGGAGAGACCATGCCATCCATACCAAAGACATGGACCTTTATTCTACCGTCTGCCTCTGGGA
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TTGCTCCAGGATTCTGGTGCCCTGATGGAACATTAACATCATCCATGGACAGCATGAAGCTGTAAT
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CAGGCCAAAGAGCGAGTCTGTAATCTGATTGATAGTGGAAACAAAGGAGGGAGCTTCCATCCTTCTTGAT
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GTGCCTTTGCCAATGTTCTCATTACCGGCTCTCGATCCTCCTCAGGGGAGACCAATTTCTATGGC
AAACAGGGCATCCAATTCTACACTCAGTTAAAGACCATTACTTCTCAGTGAAAGAAGAAGATGCTACT
CTTTCCTCACCTGCTGTTGTCATGCCTACCATGGGCCGT
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```



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**Protein Sequence:** >Peptide sequence encoded by RG237865  
 Blue=ORF Red=Cloning site Green=Tag(s)

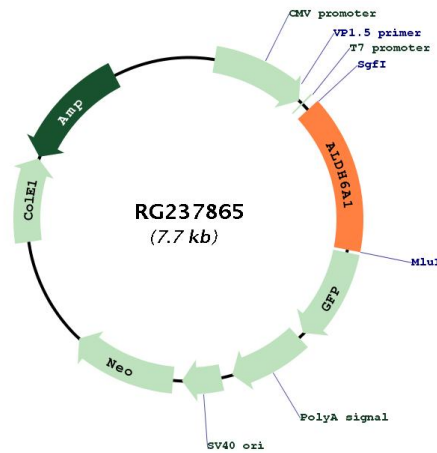
MMGETMPSITKMDL YSYRLPLGVCAGIAPFNFPAMIPLWMFPMAMVCGNTFLMKPSERVPGATMLLAK  
 LLQDSGAPDGLNI IHGQHEAVNFICDHPDIKAI SFVGSNKAGEYIFERGSRHGKRQANMGAKNHGVV  
 MPDANKENTLNQLVGA AFGAAGQRCMALSTAVL VGEAKKWLPELVEHAKNLRVNAGDQPGADLGPLITP  
 QAKERVNCLIDSGTKEGASILLDGRKIKV KGYENGNFVGPTII SNVKPNMTCYKEEIFGPVLVLETET  
 LDEAIQIVNNNPYNGTAIFTTNGATARKY AHLVDVGQVGVNVP IPVPLPMFSFTGSRSSFRTDNFYG  
 KQGIQFYTQLKTITSQWKEEDATLSSPAVVMPTMGR  
**TRTRPLEMESDESLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV**  
 MGYGFYHFGTYP SGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED  
 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRT FSLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



<b>ACCN:</b>	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>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]