

Product datasheet for **MG208902**

Aldh4a1 (NM_175438) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aldh4a1 (NM_175438) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Aldh4a1
Synonyms:	A930035F14Rik; Ahd-1; Ahd1; Aldh4; Aldh5a1; E330022C09; P5cd; P5cdh; P5cdhl; P5cdhs; Ssdh1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG208902 representing NM_175438
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCTGCCGCTGCCGTGCTCCGCCGATCCCTGCTGTCCACGCCTGGAGGAGCGCTGGGCTGCGATGGA
 AGCACACCTTTCTCTAAAGGTGGCCAATGAGCCCATCTTAGCATTCTCTCAGGGAAGCCCCGAGCGGGA
 TGCACTGCAGAAGGCTCTGAAGGACCTGAAGGGCCAGACGGAAGCCATCCCCTGCGTTGTCGGGGACGAG
 GAGGTGTGGACCTCCGATATACAGTACCAGTTGTCGCCCTTTAACCATGCACACAAGGTGGCCAAGTTCT
 GCTATGCTGATAAGGCCCTTGCTCAACAGAGCCATCGATGCTGCCTTGGCTGCCAGGAAAGAGTGGGACCT
 GAAGCCCATGGCAGACCGGGCCAGGTCTTCTGAAGGCGGCAGATATGCTGAGTGGGCCCGAAGGGCG
 GAAGTCTTGCCAAGACCATGGTGGGACAGGGCAAGACCGTGATCCAAGCAGAGATCGATGCTGCAGCCG
 AACTCATCGACTTCTTCAGTTCAACGCAAAGTTCGCCGTGGAAGTGGAGGGGAAACAGCCCATCAGCGT
 GCCACCCAGCACCAACCACAGGTGTACCGGGGCTGGAGGGCTTCGTGGCGGCCATCTCTCCCTTCAAC
 TTCACCGGATTGGAGGCAACCTGGCAGGCGCTCCGGCCTTAATGGGCAACGTGGTTCTGTGGAAGCCCA
 GTGACACTGCCATGCTGGCTAGCTACGCCGTCTACCGCATCTCCGGGAGGCCGGCTTGCCCCAACAT
 AATCCAGTTTGTGCCAGCCGACGGGCCAACCTTCGGGGACACAGTACCAGCTCAGAGCACCTTTGTGGC
 ATCAATTTTACAGGCAGTGTCCACCTTCAAACCTGTGGAGGCAGGTGGCCAGAACCTGGACCGGT
 TCCGTACCTTCCCACGCTTGGCTGGAGAGTGTGGCGGGAAGAATTTCCATTTCTGTGCACAGCTCGGCCGA
 CGTGGACAGCGTGGTGAAGCGGACGCTGCGCTCGGCATTCGAGTACGGCGGCCAGAAGTGTCTCAGCTGC
 TCGCGCTCTACGTGCCGAAGTCGCTGTGGCCGAGATCAAAGGGCGACTGCTGGAGGAACACAGCAGGA
 TCAAAGTGGGGGATCCTGCAGAGGACTTTGGGACCTTCTTCCGCACTGATTGATGCCAAGGCCCTTTC
 TCGCATTAAAGAAGTGGTTGGAGCATGCAGTTCCTCGCCAGCCTCAGCATCCTGGCAGGGGCCAGTGT
 AACGAGTCAGTGGTTACTACGTGGAACCATGTATCATTGAGAGCAAGGACCCACAGGAACCCATCATGA
 AGGAGGAGATCTTCGGTCTGTGTGACAGTATATGTGTACCCAGATGATAAATACAGAGAGACGCTGAA
 GCTGGTCGACAGCACTACCAGCTATGGCCTCACGGGGCAGTGTTCGCCAGGATAAAGCGATTGTCCAG
 GAGGCCACGAGGATGCTGAGGAACGCTGCTGGCAACTTCTACATCAACGATAAGTCTACTGGGTCTGTGG
 TGGGCCAGCAGCCCTTTGGGGCGCCGGGCTCAGGAACCAATGACAAGCCAGGAGTCCCCTACTACAT
 CTTACGCTGGACATACCCAGGTATCAAGGAGACTATAAGCCCTGGGGACTGGCGATACTCTAC
 ATGCAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG208902 representing NM_175438
 Red=Cloning site Green=Tags(s)

MLPLPSLRRSLLSHAWRSAGLRWKHTSSLKVANEPILAFSQGSPERDALQKALKDLKGQTEAIPCVVGD
 EVWTSDIQYQLSPFNHAKVAKFCYADKALLNRAIDAALAAKKEWDLKPMADRAQVFLKAADMLSGPRRA
 EVLAKTMVGQKTVIQAEIDAAELIDFFRNFNAKFAVELEGEQPI SVPPSTNHTVYRGLGFAVAISP
 FTAIGGNLAGAPALMGNVVLWKPSDTAMLASYAVYRILREAGLPPNIIQFVPADGPTFGDVTSSHLCCG
 INFTGVSPTFKHLWRQVAQNDRFRTFPRLAGECGGNFHFVHSSADVSVVSGTLRSFAFEYGGQKCSAC
 SRLYVPKSLWPQIKGRLL EEHSRIKVGDP AEDFTFFSAVIDAKAFARIKKWLEHARSSPSLSILAGGQC
 NESVGYVVEPCIIESKDPQEPIMKEEIFGPVLTYYVYPPDKYRETLKLVSTTSYGLTGAVFAQDKAIVQ
 EATRMLRNAAGNFYINDKSTGSVVGQPFGGARASGTNDKPGGPHYILRWTSPQVIKETHKPLGDWRYSY
 MQ

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_175438

ORF Size: 1686 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_175438.3](#), [NP_780647.2](#)

RefSeq Size: 3281 bp

RefSeq ORF: 1689 bp

Locus ID: 212647

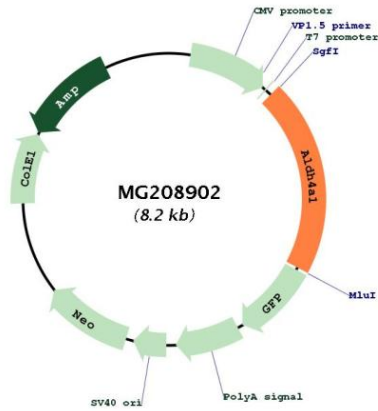
UniProt ID: [Q8CHT0](#)

Cytogenetics: 4 70.79 cM

Gene Summary:

Irreversible conversion of delta-1-pyrroline-5-carboxylate (P5C), derived either from proline or ornithine, to glutamate. This is a necessary step in the pathway interconnecting the urea and tricarboxylic acid cycles. The preferred substrate is glutamic gamma-semialdehyde, other substrates include succinic, glutaric and adipic semialdehydes (By similarity).
 [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG208902