

Product datasheet for **MG207926**

Aldh9a1 (BC003297) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aldh9a1 (BC003297) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Aldh9a1
Synonyms:	AA139417; Abaldh; ESTM40; TMABA-DH; Tmabadh
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG207926 representing BC003297
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAGTACTGGCACCTTCGTCGTGTCGAGCCGCTCAACTACCGCGCGGGGCCCGTGTGGAGCCGGTGG
 ATGCTTCCGCGCACGGAGAAAGCGTTCGAGCCAGCCACCGCCGAGTGATTGCCACTTTCGCGTGTTCAGG
 AGAAAAGGAAGTAACTTGGCCGTTGAGAATGCAAAGGCTGCCTTTAACTCTGGAGTAAGAAAAGTGGC
 CTGGAGCGCTGCCAAGTCTCTAGAGGCTGCCGGATCATCAAGGAGCGGAAGGATGAAATTGCCACCG
 TGGAGACCATCAACAACGGGAAGTCCATATTTGAGGCCCGCTGGATGTTGACACTTGTGGCAGTGCCT
 GGAATACTATGCAGGGCTGGCTGCATCCATGCCAGGCGAGCACATTAGCTCCCAGGAGGGTCTTCGCG
 TACACCGAAGAGAGCCGCTTGGGGTGTGTGGGGATAGGAGCATGGAATATCCCTTCAGATCGCCT
 GTTGGAAGTCTGCTCCGGCTCTGGCTTGTGTAATGCCATGATCTTAAGCCTTCTCCCTTCACGCTGT
 GTCTGCTCTGCTCTGGCTGAGATCTACACAAAGCGGGTGCCTCCGGGGCTTCAAGTGGTGCAA
 GGTGGGGCTGCCACAGGCCAGTTTCTGTGTCATCATCGCGAGGTGGCCAAAATCTCTTCACCGGAAGT
 TGCCCACTGGCGTGAAGATCATGGAGATGTCCGCTAAGGGAGTCAAGCCATTACTTTGGAAGTGGGGG
 CAAATCTCTCTCATCATCTTCTCAGACTGTAATATGGAGAATGCTGTGAAGGGGGCCCTGATGGCAAC
 TTCCTCACACAAGGACAGGTCTGCTGCAATGGGACTAGAGTCTTTGTGCAAAAAGGAAATTGCTGATAAT
 TCATAAATGAGGTTGTGAAGCAGACTCAGAAGATAAACTTGGAGACCCCTTCTGGAAGATACGAGGAT
 GGGCCCACTCATCAACGCCCCACATCTGGAACGAGTCTCGGGTTGTCAAGTTGGCAAAGGAGCAGGGT
 GCTACTGTGCTGTGTGGTGGAGAGGTGTATGTACCAGAGGACCCAAATTAACATGGATATTACATGA
 CACCTTGCATTTAACTAATTGCAGAGAGCATGACTTGTGTAAGAAGAGATCTTTGGACAGTCAT
 GTCCATTTTAACATTTGAACTGAAGCCGAGTTCTAGAGCGAGCTAATGACACCACTTTTGGACTAGCA
 GCTGGGGTCTTACCAGGGACATCCAGAGGGCACACCGGGTGGCGGTGAGCTGCAGGCTGGAACGTGCT
 ACATTAACAATAAATGTAGCCAGTGGAGCTGCCCTTTGGTGGCTACAAGAAGTCAAGATTTGGCAG
 AGAGAATGGCCGTGTGACGATTGAGTACTACTCTAGCTGAAGACGGTGTGTGGAGATGGCGCAGCTG
 GAGTCAGCCTTT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG207926 representing BC003297
 Red=Cloning site Green=Tags(s)

MSTGTFVVSQPLNYRGGARVEPVDASGTEKAFEPATGRVIATFACSGEKEVNLAVENAKAAFLWSKKS
 LERCQVLLAARI IKERKDEIATVETINNGKSIFEARLDVDTWCQCLEYAGLAASMAGEHIQLPGGSFG
 YTRREPLGVCVIGAWNYPFQIACWKSAPALACGNAMIFKPSPTFPVSALLLAEIYTKAGAPPGLFNVVQ
 GGAATGQFLCHHREVAKISFTGSVPTGVKIMEMSAKGVKPTITLLEGGKSPLIIFSDCNMENA VKGALMAN
 FLTQGGVCCNGTRVFVQKEIADKFINEVVKQTQKIKLGDPLLEDTRMGPLINAPHLERVLGFVKLAKEQG
 ATVLCGGEVYVPEDPKLKHGYMTPCILTNCRDDMTCVKEEIFGPVMSILTFGTEAEVLERANDTTFLA
 AGVFTRDIQRAHRVAELQAGTCYINNYVSPVELPFGGYKKSFGRENGRVTIEYYSQLKTVCEMGDV
 ESAF

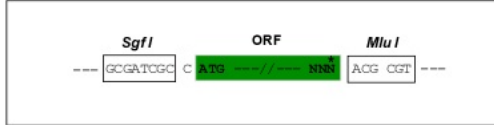
TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



EcoRI
BamHI *KpnI*
RBS
Kozac
Consensus
SgfI
AscI

CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGGCCAGATCT

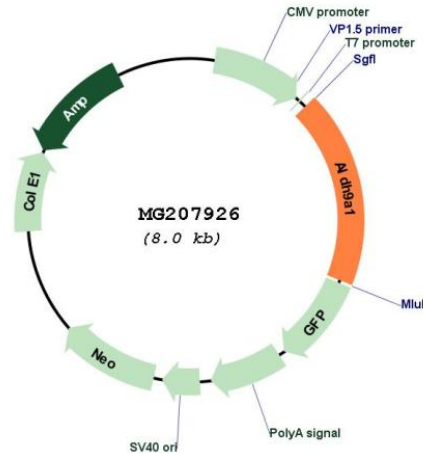
HindIII
NheI *RsrII*
MluI
NotI
XhoI
GFP Tag

CAAGCTTAACTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC ---

T R T R P L E
M E S D - - -

PmeI
FseI

--- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT
 - - E E R V Stop

Plasmid Map:


ACCN: BC003297

ORF Size: 1484 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: [BC003297](#), [AAH03297](#)

RefSeq Size: 2379 bp

RefSeq ORF: 1484 bp

Locus ID: 56752

Cytogenetics: 1 H2.3

Gene Summary: Converts gamma-trimethylaminobutyraldehyde into gamma-butyrobetaine with high efficiency (in vitro). Can catalyze the irreversible oxidation of a broad range of aldehydes to the corresponding acids in an NAD-dependent reaction, but with low efficiency.
[UniProtKB/Swiss-Prot Function]