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Product datasheet for RG216921

ALDH9A1 (NM_000696) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH9A1 (NM_000696) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALDH9A1
Synonyms:	ALDH4; ALDH7; ALDH9; E3; TMABA-DH; TMABADH; TMABALDH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

ORF Nucleotide Sequence:

>RG216921 representing NM_000696
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTTTCTCCGAGCAGGCCTGGCCGCGCTCTCCCCGCTTCTTCGCAGTCTTCGGCCCTCTCCTGTCGCCG
CCATGAGCACTGGCACCTTCGTCGTGTCGCAGCCGCTCAATTACCGCGGCGGGGCCCGCGTGGAGCCGGC
GGACGCCTCCGGTACCGAGAAAGCTTTCGAGCCAGCAACCGGCCGAGTGATAGCTACTTTCACATGTTCA
GGAGAAAAGGAAGTAAATTTGGCTGTTCAAAATGCAAAGGCTGCTTTTAAAATATGGAGTCAAAAATCTG
GCATGGAGCGTTGCCGAATCCTTTTGGAGGCTGCCAGGATAATAAGGGAACGGGAGGATGAAATTGCTAC
TATGGAGTGCATCAACAATGGCAAGTCCATCTTTGAGGCCCGCTTGGACATTGACATTTCCTGGCAGTGC
CTGGAGTATTATGCGGGCTTGGCTGCATCCATGGCTGGTGAACACATCCAGCTCCCAGGTGGATCGTTTG
GTTATACCAGAAGAGAACCACTTGGGGTATGTGTGGGAATAGGAGCATGGAACTACCCCTTTCAGATTGC
CTCTTGGAAGTCGGCTCCAGCATTAGCCTGTGGTAATGCCATGGTCTTTAAACCTTCTCCCTTTACACCT
GTTTCTGCATTGCTACTGGCTGAAATCTACAGTGAGGCTGGTGTACCTCCTGGGCTCTTCAATGTGGTGC
AGGGAGGGGCTGCCACAGGCCAGTTTCTGTGTCAGCATCCCGATGTGGCCAAAGTCTCCTTCACTGGAAG
TGTGCCCACTGGCATGAAGATCATGGAGATGTCAGCTAAAGGAATCAAACCTGTTACCTTGGAACTTGGA
GGCAAATCTCCACTCATCATCTTCTCAGACTGTGATATGAACAATGCTGTAAAGGGGGCGCTGATGGCCA
ACTTCCTCACACAAGGCCAGGTTTGCTGTAATGGCACAAGAGTATTTGTGCAGAAAGAAATTCTTGATAA
ATTTACAGAGGAAGTGGTGAAACAGACCCAAAGGATTAAAATTGGAGATCCCCTTCTGGAAGATACAAGG
ATGGGTCCACTCATCAACCGACCACACCTGGAGCGAGTCCTTGGGTTTGTCAAAGTGGCAAAGGAGCAGG
GTGCTAAAGTGTTATGTGGTGGAGATATATATGTACCTGAAGATCCCAAATTAAAGGATGGATATTACAT
GAGACCTTGTGTATTAACTAATTGCAGAGACGACATGACCTGTGTGAAGGAAGAGATCTTTGGGCCTGTT
ATGTCCATTTTATCATTTGACACTGAAGCTGAGGTTCTAGAAAGAGCCAATGATACCACTTTTGGACTAG
CAGCTGGCGTCTTTACCAGGGACATCCAACGGGCTCATAGAGTGGTAGCTGAGCTTCAGGCTGGGACGTG
CTTCATTAACAACTATAACGTCAGCCCAGTGGAGTTGCCCTTTGGTGGATATAAGAAGTCAGGATTTGGC
AGAGAGAACGGCCGTGTGACAATCGAATATTATTCACAGCTGAAGACTGTGTGTGTGGAGATGGGTGATG
TGGAATCTGCTTTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

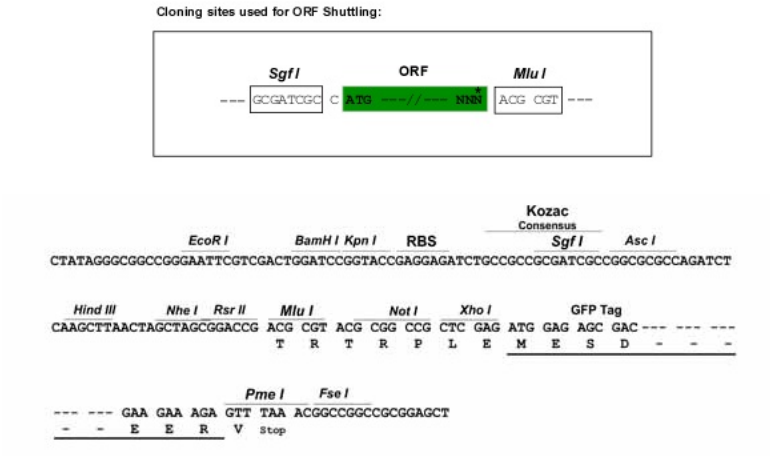
>RG216921 representing NM_000696
Red=Cloning site Green=Tags(s)

MFLRAGLAALSPLLRSLRPSPVAAMSTGTFVVSQPLNYRGGARVEPADASGTEKAFEPATGRVIATFTCS
GEKEVNLAVQNAKAAFKIWSQKSGMERCRILLEAARIIREREDEIATMECINNGKSIFEARLDIDISWQC
LEYYAGLAASMAGEHIQLPGGSFGYTRREPLGVCVGIGAWNYPFQIASWKSAPALACGNAMVFKPSPFTP
VSALLLAEIYSEAGVPPGLFNVVQGGAATGQFLCQHPDVAKVSFTGSVPTGMKIMEMSAKGIKPVTLELG
GKSPLIIFSDCDMNNAVKGALMANFLTQGQVCCNGTRVFVQKEILDKFTEEVVKQTQRIKIGDPLLEDTR
MGPLINRPHLERVLGFVKVAKEQGAKVLCGGDIYVPEDPKLKDGYYMRPCVLTNCRDDMTCVKEEIFGPV
MSILSFDTEAEVLERANDTTFGLAAGVFTRDIQRAHRVVAELQAGTCFINNYNVSPVELPFGGYKKSGFG
RENGRVTIEYYSQLKTVCVEMGDVESAF

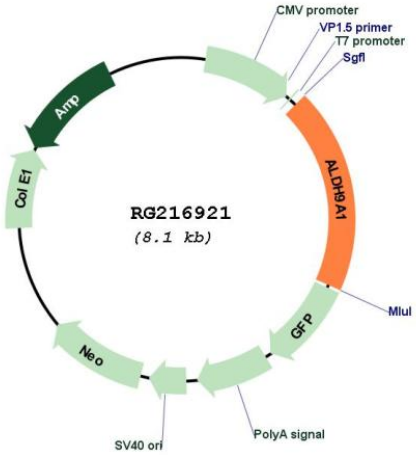
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_000696
ORF Size:	1554 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_000696.3, NP_000687.3
RefSeq Size:	2500 bp
RefSeq ORF:	1557 bp
Locus ID:	223
UniProt ID:	P49189
Cytogenetics:	1q24.1
Domains:	aldedh
Protein Families:	Druggable Genome
Protein Pathways:	Arginine and proline metabolism, Ascorbate and aldarate metabolism, beta-Alanine metabolism, Butanoate metabolism, Fatty acid metabolism, Glycerolipid metabolism, Glycolysis / Gluconeogenesis, Histidine metabolism, Limonene and pinene degradation, Lysine degradation, Metabolic pathways, Propanoate metabolism, Pyruvate metabolism, Tryptophan metabolism, Valine, leucine and isoleucine degradation
Gene Summary:	This protein belongs to the aldehyde dehydrogenase family of proteins. It has a high activity for oxidation of gamma-aminobutyraldehyde and other amino aldehydes. The enzyme catalyzes the dehydrogenation of gamma-aminobutyraldehyde to gamma-aminobutyric acid (GABA). This isozyme is a tetramer of identical 54-kD subunits. [provided by RefSeq, Jul 2008]