

Product datasheet for **RG201095**

MDH2 (NM_005918) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MDH2 (NM_005918) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MDH2
Synonyms:	DEE51; EIEE51; M-MDH; MDH; MGC:3559; MOR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG201095 representing NM_005918 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCTCTCCGCCCTCGCCGGCCTGTCAGCGCTGCTCTCCGCCGAGCTTCAGCACCTCGGCCAGAACA
ATGCTAAAGTAGCTGTGCTAGGGGCTCTGGAGGCATCGGGCAGCCACTTTCCTTCTCTGAAGAACAG
CCCCTTGGTGAGCCGCTGACCTCTATGATATCGCGCACACCCGGAGTGGCCGAGATCTGAGCCAC
ATCGAGACCAAAGCCGCTGTAAAGGCTACCTCGGACCTGAACAGCTGCCTGACTGCCTGAAAGGTTGTG
ATGTGGTAGTTATCCGGCTGGAGTCCCGAAGCCAGGCATGACCCGGGACGACCTGTCAACACCAA
TGCCACGATTGTGGCCACCCTGACCGCTGCCTGTGCCAGCACTGCCCGAAGCCATGATCTGCCTCATT
GCCAATCCGGTTAATTCCACCATCCCCATCACAGCAGAAGTTTTCAAGAAGCATGGAGTGTACAACCCCA
ACAAAATCTTCGGCGTGACGACCCTGGACATCGTCAGAGCCAACACCTTTGTTGCAGAGCTGAAGGGTTT
GGATCCAGCTCGAGTCAACGTCCCTGTCATTGGTGGCCATGCTGGGAAGACCATCATCCCCCTGATCTCT
CAGTGCACCCCAAGGTGGACTTCCCCAGGACCAGCTGACAGCACTCACTGGCGGATCCAGGAGGCCG
GCACGGAGGTGGTCAAGGCTAAAGCCGGAGCAGGCTCTGCCACCCTCTCCATGGCGTATGCCGGCAGCCG
CTTTGTCTTCTCCCTTGTGGATGCAATGAATGGAAGGAAGGTGTTGTGGAATGTTCTTCGTTAAGTCA
CAGGAAACGGAATGTACCTACTTCTCCACCCGCTGCTGCTTGGGAAAAAGGGCATCGAGAAGAACCTGG
GCATCGGCAAAGTCTCCTTTTGAGGAGAAGATGATCTCGGATGCCATCCCCGAGCTGAAGGCCTCCAT
CAAGAAGGGGAAGATTTCTGTAAGACCCTGAAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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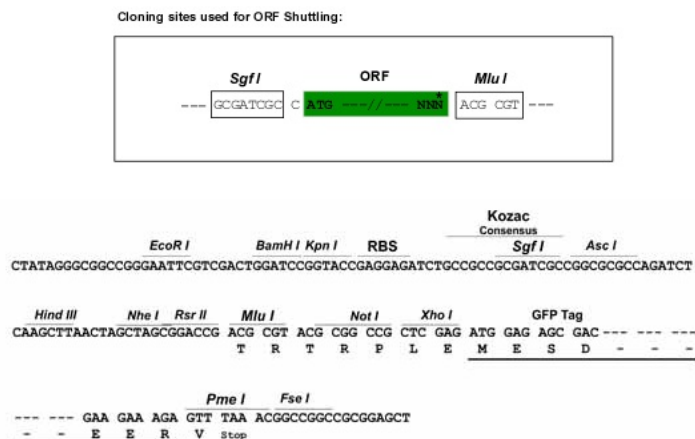
Protein Sequence: >RG201095 representing NM_005918
 Red=Cloning site Green=Tags(s)

MLSALARPVSAALRRSFSTSAQNNKAVVLGASGGIGQPLSLLLKNSPLVSRLTLYDIAHTPGVAADLSH
 IETKAAVKGYLGPEQLPDCLKGCDVVVIPAGVPRKPGMTRDDLFTNATIVATLTAACAQHCPEAMICVI
 ANPVNSTIPITAIEVFKKHGVYNPKNKIFGVTTLDIVRANTFVAELKGLDPARVNPVIGGHAGKTIIP LIS
 QCTPKVDFPQDQLTALTGRIQEAGTEVVKAKAGAGSATLSMAYAGARFVFSLVDAMNGKEGVVECSFVKS
 QTECTYFSTPLLLGKKGIEKNLIGIKVSSFEEKMISDAIPELKASIKKGEDFVKTLK

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_005918

ORF Size: 1014 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_005918.2](#), [NP_005909.2](#)

RefSeq Size: 1321 bp

RefSeq ORF: 1017 bp

Locus ID: 4191

UniProt ID: [P40926](#)

Cytogenetics: 7q11.23

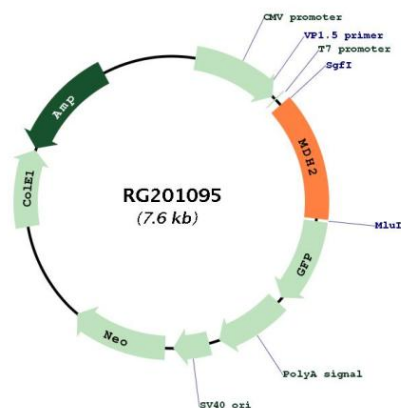
Domains: Idh

Protein Families: Druggable Genome

Protein Pathways: Citrate cycle (TCA cycle), Glyoxylate and dicarboxylate metabolism, Metabolic pathways, Pyruvate metabolism

Gene Summary: Malate dehydrogenase catalyzes the reversible oxidation of malate to oxaloacetate, utilizing the NAD/NADH cofactor system in the citric acid cycle. The protein encoded by this gene is localized to the mitochondria and may play pivotal roles in the malate-aspartate shuttle that operates in the metabolic coordination between cytosol and mitochondria. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2013]

Product images:



Circular map for RG201095