

Product datasheet for RN210984

Mdh1 (NM_033235) Rat Untagged Clone

Product data:

OriGene Technologies, Inc.

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Product Type:Expression PlasmidsProduct Name:Mdh1 (NM_033225) Rat Untagged CloneTag:Tag FreeSymbol:Mdh1Synonyms:Mdh1Vector:pCMV6-Entry (PS100001)E. coli Selection:Kanamycin (25 ug/mL)Cell Selection:NeomycinFully Sequenced ORF:>RN210984 representing NM_033235 Red=Cloning site Blue=ORF Orange=Stop codonTTTTGFAATACGACTCACTATAGGGCGGCCGGGAAATTCGTGGACTCGGTACCGAGGAGATCTGCC GCCGCGATCGCCAtGTCTAGCACACACACAACAAGAGGATGCCTCGTGACAGGAGCAGCCGGTCAGATTGGATATTCGCTGGTGACAGGAG ACGCGACAACAAAGAGAGTGCCCTCAAAGACCTGCACGCGGCCGGGAAATTCGCTGTGGACATCGCGCCAGGAGATCGCC ACGCGCAACACACAAAGAGAGTGCCCCAACGCAGCCGGCCAGGATTCGCTGGCCCAAGCGCAGCCGAGAGACGCCCACGCATCAGCGCCAGCCA		
Tag:Tag FreeSymbol:Mdh1Synonyms:Mdh1; MDL1; Mor2Vector:pCMV6-Entry (PS100001)E. coli Selection:Kanamycin (25 ug/mL)Cell Selection:NeomycinFully Sequenced ORF:>RN210984 representing NM_033235 Red=Cloning site Blue=ORF Orange=Stop codonTTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGCATCGCCGCGCGCCGATCGCCATGTCTGAACCCACTCAGAGGCGCCCGGGCAGGTCGAGTTGCATATTCGCTGCTGTACAGCA ATGTCTGAACCGGTCTGTGTGCTGCTGCAGGTGCAGCTGGCTCCTGTGGACCAGCAGGCAG	Product Type:	Expression Plasmids
Symbol:Mdh1Synonyms:Mdhl; MDL1; Mor2Vector:pCMV6-Entry (PS100001)E. coli Selection:Kanamycin (25 ug/mL)Cell Selection:NeomycinFully Sequenced ORF:>RN210984 representing NM_033235 Red=Cloning site Blue=ORF Orange=Stop codonTTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCCATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAAGCAGCCGGTCAGATTGGATATTCGCTGGTGTACAGCA ACGAGATCGCCATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAGCAGCCGGTCAGATTGGATATTCGCTGGTGTACAGCA ACGAGCATGAGAGGAGGGCCGGCAGGAGCTGCCTGTGTGGAGGCGCCAGCTGGCTG	Product Name:	Mdh1 (NM_033235) Rat Untagged Clone
Synonyms:Mdhl; MDL1; Mor2Vector:pCMV6-Entry (PS100001)E. coli Selection:Kanamycin (25 ug/mL)Cell Selection:NeomycinFully Sequenced ORF:>RN210984 representing NM_033235 Red=Cloning site Blue=ORF Orange=Stop codonTTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGAGGAGAATCGCC GCCGCGATCGCCATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAGCAGCCGGTCAGATTGCATATTCGCTGCTGTACAGCA TGGAAATGGATCTGTCTTGGACAGGAGCCACCCATCATTCGGCGACTGCCATCTGCAGAGGAGATCTGCC GCGGCGTTCCTGATGGACAGGCAGCCGCGCGACTCTCGCTGCCGCAGCTGCATTCGCAGAGGAGCCACCCATCATTCGCAGCAGGTGTCCTTGGACAGGAGCGCCACCTTCCATGGCAGCTGCCTTGCA ACAGACAAAGAAGAGGTTGCCTTCAAAGCCAGCCCATCCAT	Tag:	Tag Free
Vector: pCMV6-Entry (PS100001) E. coli Selection: Kanamycin (25 ug/mL) Cell Selection: Neomycin Fully Sequenced ORF: >RN210984 representing NM_033235 Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCGCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCGCC GCCGCGATCGCC TTTTGTAATACGACTCACTATAGGGCGGCCGGGCAATTCGTCGACTGGATCCGGTACCGAGGAGATCGCC GCCGCGATCGCC ATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAGCAGCCGGTCAGATTGCCTGTGCACAGGAGATCGCC GCCGCGCATCGCC ATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAGCCGCCGTCAGATTGCCTGTGGCACAGCAGCA TTGGAAATGGATCTGTCTTTGGAGAGGTGCCTGACTGGCAGCTGCCAGATTGCCTGTGGGACTCACGCCAGAT GGGTGTTCTGAGCGGAGGTCCTCAATGGAGCTGCCAGGCTGGCCTGCTCCAGGAGGATGCATACCCCCAGGAGGAGGACGCCAGCCTTGCA ACGACAAAGAAGAGGTGCCTTCAAAGCCAGCTGGCATGGCCTCCTGCCGAGGAGGCCCAGCCTTGGA ACGACAAGAAGAGGAGGACCTACTGAAAGCCAACGTGGACTGCCAGTGGCCTGCCAGGACGCCA GAAGTACGCCCAAGAAATCAGTTAAGCCCAGGGGAACTTCCAATGCCCAAGGCCAATCCAACGCCGAGCAA AATCTCAAATTGCTCTAAACCCGGTGATACCGCCAAGGGCAATCTCAATGCCAGGCCAATCCAACGCCGAGCAA AATCTCAAAGTCGCAGACCGCGGCGCCGCCGCGGCAAGGCGAACTCCGGCAAGGCCAATCCAACGCCGAGCAA AATCTCAAAGCCCTCAAGGACGCAGCTGCCAGGCGCAATCCTCAGGCCAATCCAACGCCGGCGCACCC CCCATTAACGACTTCCCGGAAGGCTGCCAGGCCAAGTTCCATCGCGAAGGCCAACCCACCACCAGCAGGCAA ATCTCAAGGCTGCCCGAGGCCGCCTGCGCAGGCCGCAAGGCCAACCCGCACACCACCACGAGGAAAAGGAACTCCTGGTTGGCAAGGCCAATCCTATGGTGTGCTG CCGGATGACCGCCGCGCGCGCGCGCGCAGGCAAATGGAATGAGCCTGGCCAGGCAACCCAGCAAGGAAGCCGCACCCCCCCC	Symbol:	Mdh1
E. coli Selection: Kanamycin (25 ug/mL) Cell Selection: Neomycin Fully Sequenced ORF: >RN210984 representing NM_033235 Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAGCAGCCGGTCAGATTGCATATTCGCTGCAGAGAGCAGTCGCCC GCCGCGATCGCC ATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAGCAGCCGGTCAGATTGCATATTCGCTGCAGAGAG TTGGAAATGGATCTGTCTTTGGGAAAGACCAGCCCGTCACTTCTTGTGGCTGTCGAGAGAGCAGTCGCCCTTCCACGCCGATGCACTGCAGAT GGGTGTTCTGAACAGAGAGGGTCCTCATGGAAGCCGGCCG	Synonyms:	Mdhl; MDL1; Mor2
Cell Selection:NeomycinFully Sequenced ORF:>RN210984 representing NM_033235 Red=Cloning site Blue=ORF Orange=Stop codonTTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCCATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAGCAGCCGGTCAGATTGCATATTCGCTGTGACAGGAGATCGCC GCGGTGTCTTGGAGCGGGTCCTGGTGACAGGAGCCAGCCGGTCAGATTGCCATATTCGCTGTGTGACACCCCCATGAT TGGAAATGGATCTGTCTTGGAGGTGCCTGATGGAGCTGGCCATCATTCTTGTGGCTGTTGGCACATCACCCCCATGAT TGGAAAGAGAGTGGCCTCCTGATGGAGCTGGCCATCATGAAGACCAGCCCATCATTGCAGAGTGCATGCA	Vector:	pCMV6-Entry (PS100001)
Fully Sequenced ORF: >RN210984 representing NM_033235 Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGCATCGCC ATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAGCAGCCGGTCAGATTGCATATTCGCTGCTGTACAGCA TTGGAAATGGATCTGTCTTTGGGAAAGACCAGCCAGCCATCATTCTTGTGCGTGTGGACATCACCCCCATGAT GGGTGTTCTGACGGGTGTCCTGATGGAGCTGCAAGACTGTGCCCTTCGCAGGATGTCATTCCA ACGAGCAAAGAAGAGGTTGCCTTCAAGAGCCTGGACAGCTGGCCCTTCCCCTTCGCAGGATGTCATTGCA ACGAGCAAAGAAGAGGTTGCCTTCAAAGACCTGGACGTGGCCTTCCAAGACGTGGGCCCAACCAGGCAAGACG AGGGCATGGACGAGGAAGGACCCTACTGAAAGCCTGGACGCGACGCCTTCCAAGAAGGG AGGGCATGGACGAGGAAGGACCCTACTGAAAGCCTGGACGGCGAACCTTGGGGCCACCCTTGGA GAAGTACGCCAAGAAATCAGTTAAGGTCAATGTGTGTGGGGCACCCTGCGACGCCAAGAAGGG AAGGCCCCCAAGAAATCAGTTAAGGTCAATGGTGTAACCGCGAGCCAATACAAACTGCCTGGGGGAAATCA ACCCCCCCAAGAAATCAGTTAACGGCTGAAGCTGGCGAAGTTCATCACGGCAAACCGAGCCA AAATCTCCAAATTCCCAGTACCCGATGCCAAGGGCAAACTCCAGTGGCAAACTGGGGAAATCA TTCATCAAACGCCCTCAAGACCAGCGGCGCAAGCTGCTGGCGGAAGCCTGGCGAGCCACACCAGGGGAAATCA TCCATCAACGCCGGAAGCCTGCCCGGCGAGGCCTACTCGGCGAAGGCCATCCGGAAGCACTGCTGGTGGTGTAT GAAGCCCTCAAAGGCGCCGCAGCTGCCCGGCGGCGTAATGCAAGGGAAAAGAGTTGGTGGGAAATCA TCCATCAACGCCGGCCGGCAGGCCTCCAGGCGCAAGCCTGCCGGAAGGCCACCTCCGGAAGCACTCCTATGGTGCC CCTGATGACCTGGCTCCAGGCGCGAGTCCTGGTGCGCAGCGCAACTCCTAGGGAAAATGGAC TCTGGTTGGAACCCCGGGCGGCGTCCAGGGCGCAATCCTGGCGAAGCCTGCCGAGGCAAACCGCC TTTTGAGTTTCCTCCCCGGCAGGCGCAGTCCGGCCGAAGCCGGAGGCCGGACGCGAACCCGAGGAAACGGAC TTTTGAGTTTCCTCCCCGCGAGGAGGCCTGCCGACGCAAAGGAGGCCGCGCCGAAGGGAAAAGGAAACGGC TTTTGAGTTTCCTCCCCGGCAGGCAGAAACTCATCCTCAGGAAGGGACTCGGCAGAAATGAAAAGGACTGGCCACTCCCGGAAGGCGCACCGCAGGAGGCGAAAGGAAACGGAC TTTTGAGTTTCCTCCCCCGGCAGGACGAAACTCATCCTCGGCAAGGAGGACTCGGCAGGAAAAGGAAACGGC TTTTGAGTTTCCTCCCCGGCAGGCCGAAACCCAACCGACGAAAGGAACCCGGACGAC	E. coli Selection:	Kanamycin (25 ug/mL)
Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGCATCGCC ATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAGCCAGCC	Cell Selection:	Neomycin
GCCGCGATCGCC ATGTCTGAGCCAATCAGAGTCCTCGTGACAGGAGCAGCCGGTCAGATTGCATATTCGCTGTGACAGCA TTGGAAATGGATCTGTCTTTGGGAAAGACCAGCCAGCCATCATTCTTGTGGACATCACCCCCCATGAT GGGTGTTCTGGACGGTGCCTGATGGAAGACCGGCAGCCGTCCCTTGGGAGACTGCCACCCCCCATGCAT GGGTGTTCTGGACGGTGCCTGATGGAAGACCGGCCGCTCCCTTGTGGAGCATGCCATGCAAGAGGG ACAGACAAAGAAGAGGATGCCTTCAAAGACCTGGACGTGGCCTGTCCTTGTGGGCTCCATGCCAAGAAGGG ACGGCATGGAAGAGGAAGGACCTACTGAAAGACCTGGACGGGCACACTCCCATGCCAAGAAGGG AGGGCCATGCAGAAACCACGCCAACGTAACAACCGCCAACGTGAACCCACCAACCCGAGCAACCCGAGCCA TCCAAGTCAGCACCATCGATCCCCAAGGAGAACTTCAGTTGCAGCCACAACCGAGCCAC TTCATCAAACCCAGTATCCAAGTTCAAGTCAACCGCTGATGTAGTATAAAAATGTCATTATCTGGGGAAATCA TTCATCAAACCCAGTATCCAAGATGCCAATGGCCAATGCAAGGAGAAAGAA	Fully Sequenced ORF:	
TTGGAAATGGATCTGTCTTTGGGAAAGACCAGCCCATCATTCTTGTGCTGTTGGACATCACCCCCATGAT GGGTGTTCTGGACGGTGTCCTGATGGAGCTGCAAGACTGGCCCTTCTGCAGGATGTCATTGCA ACAGACAAAGAAGAGGGTTGCCTTCAAAGACCTGGACGTGGCCTGCCT		
ACAAGGATGACGACGATAAGGTTTAA Restriction Sites: Sgfl-Mlul		TTGGAAATGGATCTGTCTTTGGGAAAGACCAGCCCATCATTCTTGTGCTGTTGGACATCACCCCCATGAT GGGTGTTCTGGACGGTGTCCTGATGGAGCTGCAAGACTGTGCCCTTCCCCTTCTGCAGGATGTCATTGCA ACAGACAAAGAAGAGGTTGCCTTCAAAGACCTGGACGTGGCTGTCCTTGTGGGCTCCATGCCAAGAAGGG AGGGCATGGAGAGGAAGGACCTACTGAAAGCCAACGTGAAGATCTTCAAATCCCAGGGCCAAGCCTTGGA GAAGTACGCCAAGAAATCAGTTAAGGTCATTGTTGTGGGGGAACCCAGCCAATACAAACTGCCTGACGGCC TCCAAGTCAGCACCATCGATCCCCAAGGAGAACTTCAGTTGCCTGACTGGACTCGATTGGACCACAACCGAGCAA AATCTCAAATTGCTCTTAAACTCGGTGTAACCGCTGATGATGTAAAAAATGTCATTATCTGGGGAAATCA TTCATCAACCCAGTATCCAGATGTCAATCATGCCAAGGTGAAATTGCAAGGAAAAGAAGTTGGTGTGTAT GAAGCCCTCAAAGACGACAGCTGGCTCAAGGGAGAGTTCATCACGACTGTGCAGCAGCGTGGTGCTGCTG TCATCAAGGCTCGGAAGCTGCCAGTGCCATGTCTGCTGCGAAGGCCATCTCGGACCACATCAGAGACAT CTGGTTTGGAACCCCGGAGGGCGAGTTCGTGCGATGGGCGTAATCTCTGATGGCAACTCCTATGGTGTC CCTGATGACCTGCTCTACTCGTTCCCTGTCGTGGATCAAGAATAAGACTGGAAGTTGTTGAAGGCCTCC CCATTAACGACTTCTCCCGTGAGAAAGAGGGCCTGACCGAGGAAAAAGGAAACGGAC
ACCN: NM_033235	Restriction Sites:	Sgfl-Mlul
	ACCN:	NM_033235



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GRIGENE Mdh1	(NM_033235) Rat Untagged Clone – RN210984
Insert Size:	1005 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	 Centrifuge at 5,000xg for 5min. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. Close the tube and incubate for 10 minutes at room temperature. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 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:	<u>NM 033235.2, NP 150238.1</u>
RefSeq Size:	1878 bp
RefSeq ORF:	1005 bp
Locus ID:	24551
UniProt ID:	<u>O88989</u>
Cytogenetics:	14q22
Gene Summary:	This gene encodes an enzyme that catalyzes the NAD/NADH-dependent, reversible oxidation of malate to oxaloacetate in many metabolic pathways, including the citric acid cycle. Two main isozymes are known to exist in eukaryotic cells: one is found in the mitochondrial matrix and the other in the cytoplasm. This gene encodes the cytosolic isozyme, which plays a key role in the malate-aspartate shuttle that allows malate to pass through the mitochondrial membrane to be transformed into oxaloacetate for further cellular processes. A recent study showed that a C-terminally extended isoform is produced by use of an alternative in-frame translation termination codon via a stop codon readthrough mechanism, and that this isoform is localized in the peroxisomes. [provided by RefSeq, Feb 2016] Transcript Variant: This transcript (1) encodes two isoforms, which result from the use of alternative in-frame translation termination codons. The shorter isoform (Mdh1) results from translation termination at the upstream UGA stop codon, while the longer isoform (Mdh1x) results from UGA stop codon readthrough to the downstream UGA termination codon. This RefSeq represents the shorter isoform (Mdh1), which is localized in the cytosol.

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