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Product datasheet for SC310521

MTHFD2 (NM_006636) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MTHFD2 (NM_006636) Human Untagged Clone
Tag:	Tag Free
Symbol:	MTHFD2
Synonyms:	NMDMC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

Fully Sequenced ORF:

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>SC310521 representing NM_006636.
Blue=Insert sequence Red=Cloning site Green=Tag(s)

GCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGCTGCGACTTCTCTAATGTCTGCTTTGGCTGCCCGGCTGCTGCAGCCCGCGCACAGCTGCTCCCTT
CGCCTTCGCCCTTTCCACCTCGCGGCAGTTCGAAATGAAGCTGTTGTCATTTCTGGAAGGAAACTGGCC
CAGCAGATCAAGCAGGAAGTGCGGCAGGAGGTAGAAGAGTGGGTGGCCTCAGGCAACAAACGGCCACAC
CTGAGTGTGATCCTGGTTGGCGAGAATCCTGCAAGTCACTCCTATGTCCTCAACAAAACCAGGGCAGCT
GCAGTTGTGGGAATCAACAGTGAGACAATTATGAAACCAGCTTCAATTTCAGAGGAAGAATTGTTGAAT
TTAATCAATAAACTGAATAATGATGATAATGTAGATGGCCTCCTTGTTCAGTTGCCTCTTCCAGAGCAT
ATTGATGAGAGAAGGATCTGCAATGCTGTTTCTCCAGACAAGGATGTTGATGGCTTTCATGTAATTAAT
GTAGGACGAATGTGTTTGGATCAGTATTCCATGTTACCGGCTACTCCATGGGGTGTGTGGGAAATAATC
AAGCGAACTGGCATTCCAACCCTAGGGAAGAATGTGGTTGTGGCTGGAAGGTCAAAAAACGTTGGAATG
CCCATTGCAATGTTACTGCACACAGATGGGGCGCATGAACGTCCCGGAGGTGATGCCACTGTTACAATA
TCTCATCGATATACTCCCAAAGAGCAGTTGAAGAAACATACAATTCTTGCAGATATTGTAATATCTGCT
GCAGGTATTCCAAATCTGATCACAGCAGATATGATCAAGGAAGGAGCAGCAGTCATTGATGTGGGAATA
AATAGAGTTCACGATCCTGTAACTGCCAAACCCAAGTTGGTTGGAGATGTGGATTTTGAAGGAGTCAGA
CAAAAAGCTGGGTATATCACTCCAGTTCCTGGAGGTGTTGGCCCCATGACAGTGGCAATGCTAATGAAG
AATACCATTATTGCTGCAAAAAAGGTGCTGAGGCTTGAAGAGCGAGAAGTGCTGAAGTCTAAAGAGCTT
GGGGTAGCCACTAATTAA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
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Restriction Sites: SgfI-MluI

ACCN: NM_006636

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Insert Size:	1053 bp
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery. 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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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_006636.3
RefSeq Size:	2208 bp
RefSeq ORF:	1053 bp
Locus ID:	10797
UniProt ID:	P13995
Cytogenetics:	2p13.1
Domains:	THF_DHG_CYH
Protein Families:	Druggable Genome
Protein Pathways:	Glyoxylate and dicarboxylate metabolism, Metabolic pathways, One carbon pool by folate
MW:	37.9 kDa

Gene Summary: This gene encodes a nuclear-encoded mitochondrial bifunctional enzyme with methylenetetrahydrofolate dehydrogenase and methenyltetrahydrofolate cyclohydrolase activities. The enzyme functions as a homodimer and is unique in its absolute requirement for magnesium and inorganic phosphate. Formation of the enzyme-magnesium complex allows binding of NAD. Alternative splicing results in two different transcripts, one protein-coding and the other not protein-coding. This gene has a pseudogene on chromosome 7. [provided by RefSeq, Mar 2009]
Transcript Variant: This variant (1) represents the shorter transcript and is the protein-coding transcript.