

Product datasheet for **RG202143**

MTHFD2 (NM_006636) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MTHFD2 (NM_006636) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MTHFD2
Synonyms:	NMDMC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG202143 representing NM_006636 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTGCGACTTCTCTAATGTCTGCTTTGGCTGCCCGGCTGCTGCAGCCCGCGCACAGCTGCTCCCTTC
GCCTTCGCCCTTTCCACCTCGCGGCAGTTCGAAATGAAGCTGTTGTCAATTTCTGGAAGGAAACTGGCCCA
GCAGATCAAGCAGGAAGTGGCGAGGAGGTAGAAGAGTGGGTGGCCTCAGGCAACAAACGGCCACACCTG
AGTGTGATCCTGGTTGGCGAGAATCCTGCAAGTCACTCCTATGTCCTCAACAAAACAGGGCAGCTGCAG
TTGTGGGAATCAACAGTGAGACAATTATGAAACCAGCTTCAATTTAGAGGAAGAATTGTTGAATTTAAT
CAATAAACTGAATAATGATGATAATGTAGATGGCCTCCTTGTTCAAGTTGCCTCTCCAGAGCATATTGAT
GAGAGAAGGATCTGCAATGCTGTTTCTCCAGACAAGGATGTTGATGGCTTTCATGTAATTAATGTAGGAC
GAATGTGTTTGGATCAGTATCCATGTTACCGGCTACTCCATGGGGTGTGTGGGAAATAATCAAGCGAAC
TGGCATTCCAACCTAGGGAAGAATGTGGTTGTGGCTGGAAGGTCAAAAAACGTTGGAATGCCCATTTGCA
ATGTTACTGCACACAGATGGGGCGCATGAACGTCCCGGAGGTGATGCCACTGTTACAATATCTCATCGAT
ATACTCCAAAGAGCAGTTGAAGAAACATACAATCTTGCAGATATTGTAATATCTGCTGCAGGTATTCC
AAATCTGATCACAGCAGATATGATCAAGGAAGGAGCAGCAGTCATTGATGTGGGAATAAATAGAGTTCAC
GATCCTGTAACGCAACCCAAAGTTGGTTGGAGATGTGGATTTTGAAGGAGTCAGACAAAAAGCTGGGT
ATATCACTCCAGTTCCTGGAGGTGGGCCCATGACAGTGGCAATGCTAATGAAGAATACCATATTGC
TGCAAAAAAGGTGCTGAGGCTTGAAGAGCGAGAAGTGCTGAAGTCTAAAGAGCTTGGGGTAGCCACTAAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG202143 representing NM_006636
Red=Cloning site Green=Tags(s)

MAATSLMSALAAARLLQPAHSCSLRLRPFHLAAVRNEAVVISGRKLAQQIKQEVQRQVEEWWASGNKRPHL
 SVILVGENPASHSYVLNKTRAAAVVGINSETIMKPASISSEELNLINKLNDDNDVGLLVQLPLPEHID
 ERRICNAVSPDKDVGDFHVINVGRMCLDQYSMLPATPWGWWEIIKRTGIPTLGKNVVVAGRSKNVGMPIA
 MLLHTDGAHERPGGDATVTIISHRYTPKEQLKKHTILADIVIISAAGIPNLITADMIKEGAAVIDVGINRVH
 DPVTAKPKLVGDVDFEGVRQKAGYITPVPGGVGPMTVAMLKNTIIAAKKVLRLREEREVLKSKELGVATN

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_006636

ORF Size: 1050 bp

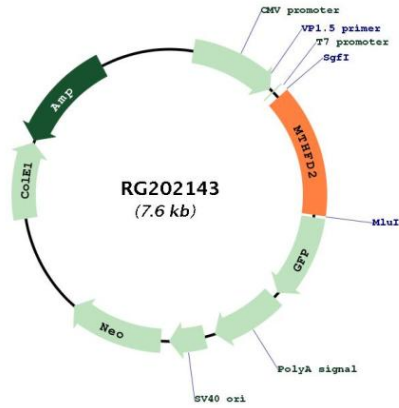
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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 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:	<ol style="list-style-type: none">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_006636.4
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
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]

Product images:



Circular map for RG202143