

Product datasheet for **RG203095**

MTHFD2 (NM_001040409) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MTHFD2 (NM_001040409) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MTHFD2
Synonyms:	methylenetetrahydrofolate dehydro; methylene tetrahydrofolate dehydrogenase (NAD ⁺ dependent), methenyltetrahydrofolate cyclohydrolase; methylene tetrahydrofolate dehydrogenase 2; NAD-dependent methylene tetrahydrofolate dehydrogenase cyclohydrolase; NMDMC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG203095 representing NM_001040409 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAAACCAGCTTCAATTCAGAGGAAGAATTGTTGAATTTAATCAATAAACTGAATAATGATGATAATG
TAGATGGCCTCCTTGTTTCAGTTGCCTCTCCAGAGCATATTGATGAGAGAAGGATCTGCAATGCTGTTTC
TCCAGACAAGGATGTTGATGGCTTTCATGTAATTAATGTAGGACGAATGTGTTGGATCAGTATTCATG
TTACCGGCTACTCCATGGGGTGTGTGGAAATAATCAAGCGAACTGGCATTCCAACCTAGGAAGAATG
TGGTTGTGGCTGGAAGGTCAAAAAACGTTGGAATGCCATTGCAATGTTACTGCACACAGATGGGCGCA
TGAACGTCCCGGAGGTGATGCCACTGTTACAATATCTCATCGATATACTCCAAAGAGCAGTTGAAGAAA
CATACAATTCTTGAGATATTGTAATATCTGCTGCAGGATTCCAATCTGATCACAGCAGATATGATCA
AGGAAGGAGCAGCAGTCATTGATGTGGGAATAATAGAGTTCACGATCCTGTAAGTCCAAACCAAGTT
GGTTGGAGATGTGGATTTGAAGGAGTCAGACAAAAGCTGGGTATCACTCCAGTTCTGGAGGTGTT
GGCCCCATGACAGTGGCAATGCTAATGAAGAATACCATTATTGCTCAAAAAAGGTGCTGAGGCTTGAAG
AGCGAGAAGTCTGAAGTCTAAAGAGCTTGGGGTAGCCACTAAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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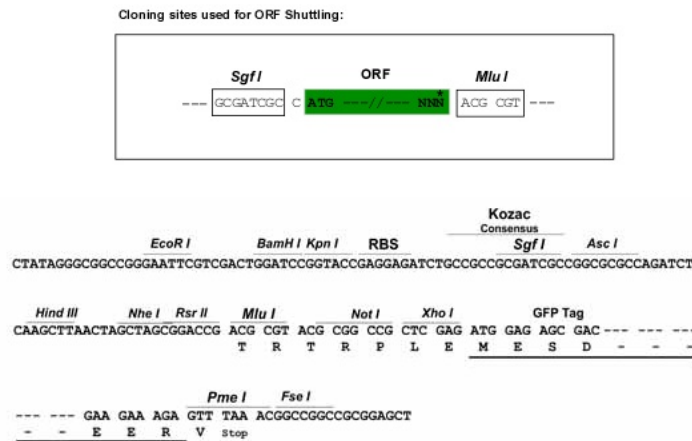
Protein Sequence: >RG203095 representing NM_001040409
Red=Cloning site Green=Tags(s)

MKPASISEEELLNLINKLNDDNDVGLLVQLPLPEHIDERRICNAVSPDKDVDGFHVINVGRMCLDQYSM
 LPATPWGVWEIIKRTGIPTLGKNVVVAGRSKNVGMPIAMLLHTDGAHERPGGDATVTISHRYTPKEQLKK
 HTILADIVISAAGIPNLITADMIKEGAAVIDVGINRVHDPVTAKPKLVGDVDFEGVRQKAGYITPVPGGV
 GPMTVAMLMKNTIIAAKKVLRLEEREVLKSKELGVATN

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001040409

ORF Size: 744 bp

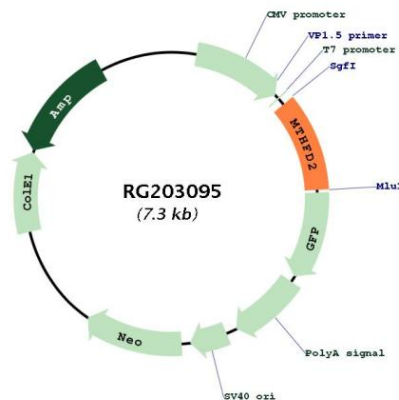
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	<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_001040409.1 , NP_001035499.1
RefSeq Size:	2306 bp
RefSeq ORF:	746 bp
Locus ID:	10797
Cytogenetics:	2p13.1
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 RG203095