

Product datasheet for **MG211246**

Mthfd1 (NM_138745) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mthfd1 (NM_138745) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mthfd1
Synonyms:	DC; Dcs; E430024A07Rik; Mthfd
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MG211246 representing NM_138745
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCACCAGCGGAATCCTGAACGGGAACTGGTTTCTGCGCAATCAGGGATCGACTGAAGAACCAGG
 TAACTCGGATGCAGGAGCAGGTACCTGGCTTACCCTGGCTGGCGATCCTGCAGGTTGGCGACAGAGA
 TGATTCTAATCTTTATATAAATGTGAAGCTGAAGGCTGCTGAGGAGATTGGGATCAAAGCCACTCACATT
 AAATTACCAAGAACATCCACAGAGTCCGAGGTATTAATAATGTCATCTCCCTGAATGAGGATGCCTCTG
 TGCACGGATTCATAGTGCAGCTGCCTTTAGATTACAGAAATCCATTAACACTGAGGCAGTCATCAATGC
 CATTGCACCCGAGAAGGATGTGGATGGGTTGACGAGCGTCAGTGTGGGAAGCTCGCCAGAGGTGATCTA
 AATGACTGCTTCCATCCCATGCACACCCAAGGGATGCTTGGAACTCATCAAAGAGGCAGGGGTGCAGATTG
 CCGGAAGGCACCGGTGGTGGTGGTGAAGTAAGATAGTTGGTGCACCCATGCATGACCTCCTTCTGTG
 GAACAATGCCACGGTGACCACCTGCCACTCCAAGACTGCCAATCTGGACAAGGAGGTAATAAAGGAGAC
 ATTCTGGTGGTTGCCACAGGCCAGCCTGAGATGGTGAAGGGGAGTGGATCAAGCCTGGGGCTGTGGTCA
 TAGACTGTGGGATCAATTATGTTCCAGATGATACAAAACCAAATGGAAGGAAAGTCGTGGGTGATGTGGC
 CTACGATGAGGCCAAGGAGAGGGCGAGCTTTATCACGCCTGTCCCTGGTGGCGTGGGGCCATGACCGTG
 GCAATGCTGATGCAGAGCACAGTAGAGAGCGCACAGCGCTTCTACAGAAATTAAGCCAGGGAAGTGGA
 CAATTCAGTATAACAAGCTGAACCTCAAGACTCCTGTCCCAAGTGACATTGCTATATCACGATCTTGCAA
 ACCAAAGCTCATCGGGAACCTGGCCCGAGAAATCGGGCTGCTCACCGAAGAGGTGGAGTTGTACGGGGAA
 ACGAAGGCTAAAGTCTTGCTGTGAGCATTAGATCGCTGAAGTATCAGCCAGATGGGAAATATGTCGTGG
 TGACTGGAACTACTCCAACACCGCTGGGAGAAGGGAAGTACCACCAGATCGGGCTGGTGCAGGCCCT
 CGGCGCCACCTGCGACAGAACGCTTTTGCCTGTGTGCGACAGCCTTCGACAGGGCCACCTTTGGGATA
 AAAGGTGGCGCTGCAGGAGGCGGCTATCCAGGTCATTCCAATGGAAGAGTTTAACTCCACCTCACTG
 GTGACATCCACGCCATCACTGCTGCTAACAACTCGTGGCTGCTGCCATTGATGCTCGGATATTTTCATGA
 GCTGACCCAGACAGACAAGGCTCTCTTAAATCGTCTGGTACCTTCAGTAAACGGAATAAGAAAATCTCT
 GACATCCAAATCCGAGGTTACGGAGGCTAGGCATTGAGAAGACTGACCCACCACGCTGACAGATGACG
 AGATAACAGATTTGCAAGACTGGATATTGACCCAGAAACCATAACATGGCAGAGAGTGTGGACACCAA
 CGATAGATTCCTGAGGAAGTACAATTGGACAGTCTCCAACAGAGAAAGCCACACACGCACGGCCAG
 TTTGATATCTCTGTGCCAGTGAGATCATGGCAGTCTGGCCCTCACGAGCTCTCTGGAAGACATGAGAG
 AGAGACTGGGCAGAAATGGTGGTGGCGTCCAGTAAGAAAGGGGAGCCTATCAGTTGCGAAGACCTGGGCGT
 GAGTGGGACGCTGACGGTGTGATGAAGGATGCAATCAAGCCAACTCATGCAGACCTTAGAGGGCACG
 CCAGTGTTTGTCATGCCGGGCTTTCCGCAACATTGCACACGGGAATCCTCCATCATTGCAGACCGGA
 TTGCACTCAAGCTGGTAGGCCCTGAGGGCTTCGTAGTGACGGAAGCTGGATTCCGAGCAGACATAGGAAT
 GGAAAAGTTCTTCAACATCAAGTGCCGGTATTCTGGTCTCCAGCCACACGTGGTGGTCTGGTTGCCACT
 GTCAGGGCCCTTAAGATGCACGGGGTGGCCCCACGGTACCCTGGACTACCTCTTCCCAAGGCTTACA
 CAGAAGAGGACCTGGACCTGGTTGAAAAGGGCTTCAGTAACTTGAGGAAACAAATCGAAAATGCTAGAAT
 GTTTGGAGTCCCTGTGCTGCTGGCTGTGAACGTGTTCAAGACAGATACAGATGCTGAGCTGGACCTGTG
 AGCCGCTCTCCAGAGAACACGGGGCTTTTGTGCTGTCAAGTGCACCCACTGGGAGAAAGGGGGCCAGG
 GGGCCTTGGCCCTGGCTCAGGCTGTCCAGAGAGCGTCACAGGCCCCAGCAGCTTCCAGCTCCTCTATGA
 CCTCAAGCTCTCAATTGAGGATAAAATCAGGATTATTGCACAGAGGATCTACGGGCCGATGACATCGAA
 TTGCTCCCGGAAGCACAGAAACAAAGCAGAAATTAACAAAGCAGGGCTTTGGGAATCTACCCATCTGCA
 TGGCCAAAACACACTTGTCTTGTCTCACAAACCCAGAGCAAAAAGGGGTGCCTACTGTTTCTGTTCTGCC
 CATCCGGACATCCGTGCCAGCTTGGGGCAGTTTCTGTATCCTTTAGTAGGAACGATGAGCACAATG
 CCTGGACTCCCTACGAGGCCCTGTTTTATGATATTGATTTGGATCCTGAAACGGAACAAGTGAATGGAT
 TGTTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG211246 representing NM_138745
 Red=Cloning site Green=Tags(s)

MAPAGILNGKLVSAQIRDRLKNQVTRMQEQVPGFTPLAILQVGDRRDSDNLYINVKLKAAEEIGIKATHI
 KLPRTSTESEVLKYVISLNEDASVHGFIVQLPLDSENSINTEAVINAIPEKDVGLT SVSAGKLARGDL
 NDCFIPCTPKGCLELIKEAGVQIAGRHAVVVGRSKIVGAPMHDLLLWNNATVTTCHSKTANLDKEVKNKG
 ILVVATGQPEMVKGEWIKPGAVVIDCGINYPDDTKPNGRKYVGDVAYDEAKERASFITPVGGVGPMTV
 AMLMQSTVESAQRFLLQKFKPGKWTIQYNKLNKTPVPSDIAISRSCPKLIGNLAREIGLLTEEVELYGE
 TKAKVLLSALDRLKYQPDGKYVVVTGITPTPLGEGKSTTTIGLVQALGAHLRQNVFACVRQPSQGPFTGI
 KGGAAAGGYSQVIPMEEFNLHLTGDIHAITAANNLVAAAIDARIFHELTQTDKALFNRLVPSVNGIRKFS
 DIQIRRLRRLGIEKTDPTTLDDEINRFARLDIDPETITWQRVLDTNDRFLRKITIGQSPTEKGHTRTAQ
 FDISVASEIMAVLALTSLEDMRERLRMNVASSKKGEPISCEDLGVSGTLTVLMKDAIKPNMQTLEGT
 PVFVHAGPFANIAHGNSIIADRIALKLVGPEGFVVTEAGFGADIGMEKFFNIKCRYSLQPHVVVLVAT
 VRALKMHGGGPTVTAGLPLPKAYTEEDLDLVEKGF SNLRKQIENARMFGVPPVVAVNVFKTDTDAELDLV
 SRLSREHGAFDAVKCTHWAEGGQALALAQAVQRASQAPSSFQLLYDLKLSIEDKIRIIAQRIYGADDIE
 LLPEAQNKAEIYTKQGFNLPICMKTHLSL SHNPEQKGVPTGFVLPIRDIRASVGAGFLYPLVGTMSTM
 PGLPTRPCFYDIDLDPETEQVNGLF

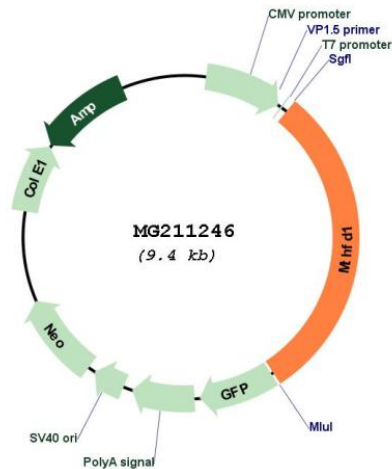
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_138745

ORF Size: 2805 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_138745.1](#), [NP_620084.1](#)

RefSeq Size: 3159 bp

RefSeq ORF: 2808 bp

Locus ID: 108156

UniProt ID: [Q922D8](#)

Cytogenetics: 12 C3

Gene Summary:

This gene encodes a trifunctional cytoplasmic enzyme. The encoded protein functions as a methylenetetrahydrofolate dehydrogenase, a methenyltetrahydrofolate cyclohydrolase, and a formyltetrahydrofolate synthase. The encoded enzyme functions in de novo synthesis of purines and thymidylate and in regeneration of methionine from homocysteine. [provided by RefSeq, Oct 2009]