

# Recombinant Full Length Human MTHFD1 Protein, C-Flag-tagged

**Cat. No.** MTHFD1-282HFL    **Lot. No.** (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant Full Length Human MTHFD1 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
<b>Species</b>	Human
<b>Source</b>	Mammalian Cells
<b>ProteinLength</b>	1-935 aa
<b>Description</b>	This gene encodes a protein that possesses three distinct enzymatic activities, 5,10-methylenetetrahydrofolate dehydrogenase, 5,10-methenyltetrahydrofolate cyclohydrolase and 10-formyltetrahydrofolate synthetase. Each of these activities catalyzes one of three sequential reactions in the interconversion of 1-carbon derivatives of tetrahydrofolate, which are substrates for methionine, thymidylate, and de novo purine syntheses. The trifunctional enzymatic activities are conferred by two major domains, an aminoterminal portion containing the dehydrogenase and cyclohydrolase activities and a larger synthetase domain.
<b>Form</b>	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.
<b>Molecular Mass</b>	101.4 kDa
<b>AA Sequence</b>	MAPAEILNGKEISAQIRARLKNQVTQLKEQVPGFTPRLAILQVGNRDDSPLYINVKLK AAEEIGIKATHI KLPRTTTESEVMKYITSLNEDSTVHGFLVQLPLDSENSINTEEVINAI

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APEKDVDGLTSINAGRLARGDL NDCFIPCTPKGCELIKETGVPIAGRHAVVVGRSKI  
 VGAPMHDLNATVTTCHSKTAHLDEEVNKGD ILVVATGQPEMVKGEWIKPGAI  
 VIDCGINYVPDDKKPNRGRKVVGDVAYDEAKERASFITPVPGGVGPMTV AMLMQSTV  
 ESAKRFLEKFKPGKWMIQYNNLNLKTPVPSDIDISRSCPKPIGKLAREIGLLSEEVEL  
 YGE TKAKVLLSALERLKHDPDGKYVVVTGITPTPLGEGKSTTTIGLVQALGAHLYQN  
 VFACVRQPSQGPTFGI KGGGAAGGGYSQVIPMEEFNLHLTGDIHAITAANNLVAAID  
 ARIFHELTQTDKALFNRLVPSVNGVRRFS DIQIRRLKRLGIEKTDPTTLTDEEINRFAR  
 LDIDPETITWQRVLDTNRFLRKITIGQAPTEKGHTRTAQ FDISVASEIMAVLALTTSL  
 EDMRERLGKMMVASSKKGEPVSAEDLGVSGALTVLMKDAIKPNLMQTLEGT PVFV  
 HAGPFANIAHGNSSIIADQIALKLVGPEGFVVTEAGFGADIGMEKFFNIKCRYSGLCP  
 HVVVLVAT VRALKMHGGGPTVTAGLPLPKAYIQENLELVEKGFNSLKKQIENARMF  
 GIPVVAVNAFKTDESELDLI SRLSREHGAFDAVKCTHWAEGGKALALAQAVQR  
 AAQAPSSFQLLYDLKLPVEDKIRIIAQKIYGADDIE LLPEAQHKAEVYTKQGFGNLPIC  
 MAKTHLSLSHNPEQKGVPTGFILPDIRASVGAGFLYPLVGTMSTM  
 PGLPTRPCFYDIDLDPETE QVNGLFTRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Purity** > 80% as determined by SDS-PAGE and Coomassie blue staining.

**Stability** Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

**Storage** Store at -80 centigrade.

**Concentration** >50 ug/mL as determined by microplate BCA method.

**Preparation** Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.

**Protein Families** Druggable Genome, Stem cell - Pluripotency

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<b>Protein Pathways</b>	Glyoxylate and dicarboxylate metabolism, Metabolic pathways, One carbon pool by folate
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<b>Full Length</b>	Full L.
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## GENE INFORMATION

<b>Gene Name</b>	MTHFD1 methylenetetrahydrofolate dehydrogenase, cyclohydrolase and formyltetrahydrofolate synthetase 1 [ Homo sapiens (human) ]
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<b>Official Symbol</b>	MTHFD1
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<b>Synonyms</b>	CIMAH; MTHFC; MTHFD
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<b>Gene ID</b>	4522
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<b>mRNA Refseq</b>	NM_005956.4
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<b>Protein Refseq</b>	NP_005947.3
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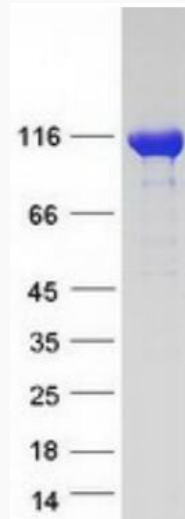
<b>MIM</b>	172460
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<b>UniProt ID</b>	P11586
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Coomassie blue staining of purified MTHFD1 protein.

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