

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

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

SPECIFICATION

Product Overview	Recombinant Full Length Human MTHFD1 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian Cells
ProteinLength	1-935 aa
Description	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.
Form	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.
Molecular Mass	101.4 kDa
AA Sequence	MAPAEILNGKEISAQIRARLKNQVTQLKEQVPGFTPLAILQVGNRDDSPLYINVKLK AAEEIGIKATHI KLPRTTTESEVMKYITSLNEDSTVHGFLVQLPLDSENSINTEEVINAI

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APEKDVDGLTSINAGRLARGDL NDCFIPCTPKGCLELIKETGVPIAGRHAVVVGRSKI
 VGAPMHDLLLWNNATVTTCHSKTAHLDEEVNKGD ILVVATGQPEMVKGEWIKPGAI
 VIDCGINYVPDDKKPNGRKVVGDVAYDEAKERASFITPVPGGVGPMTV AMLMQSTV
 ESAKRFLEKFKPGKWMIQYNNLNLKTPVPSDIDISRCKPKPIGKLAREIGLLSEEVEL
 YGE TKAKVLLSALERLKHDPDGKYVVVTGITPTPLGEGKSTTTIGLVQALGAHLYQN
 VFACVRQPSQGPTFGI KGGAAGGGYSQVIPMEEFNLHLTGDIHAITAANNLVAAID
 ARIFHELTQTDKALFNRLVPSVNGVRRFS DIQIRRLKRLGIEKTDPTTLTDEEINRFAR
 LDIDPETITWQRVLDTNDRLRKITIGQAPTEKGHTRTAQ FDISVASEIMAVLALTSL
 EDMRERLGKMMVASSKKGEPVSAEDLGVSGALTVLMKDAIKPNLMQTLEGT PVFV
 HAGPFANIAHGNSSIIADQIALKLVGPEGFVVTEAGFGADIGMEKFFNIKCRYSGLC
 HVVVLVAT VRALKMHGGGPTVTAGLPLPKAYIQENLELVEKGFSNLKKQIENARMF
 GIPVVAVNAFKTDTESELDLI SRLSREHGAFDAVKCTHWAEGGKGALALAQAVQR
 AAQAPSSFQLLYDLKLPVEDKIRIIAQKIYGADDIE LLPEAQHKADEVYTKQGFGNLPIC
 MAKTHLSLSHNPEQKGVPTGFILPIRDIRASVGAGFLYPLVGTMTSTM
 PGLPTRPCFYDIDLDPETEQVNGLFTRTRPLEQKLISEEDLAANDILDYKDDDDKV

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

Protein Pathways	Glyoxylate and dicarboxylate metabolism, Metabolic pathways, One carbon pool by folate
Full Length	Full L.
GENE INFORMATION	
Gene Name	MTHFD1 methylenetetrahydrofolate dehydrogenase, cyclohydrolase and formyltetrahydrofolate synthetase 1 [Homo sapiens (human)]
Official Symbol	MTHFD1
Synonyms	CIMAH; MTHFC; MTHFD
Gene ID	4522
mRNA Refseq	NM_005956.4
Protein Refseq	NP_005947.3
MIM	172460
UniProt ID	P11586

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