

Recombinant Human MTHFD1 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. MTHFD1-5707H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	MTHFD1 MS Standard C13 and N15-labeled recombinant protein (NP_005947) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
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.
Molecular Mass	101.5 kDa
AA Sequence	MAPAEILNGKEISAQIRARLKNQVTQLKEQVPGFTPRLAILQVGNRDDSPLYINVKLK AAEEIGIKATHIKLPRTTTESEVMKYITSLNEDSTVHGFLVQLPLDSENSINTEEVINAIA PEKDVDGLTSINAGRLARGDLNDCFIPCTPKGCLELIKETGVPIAGRHAVVVGRSKIV GAPMHDLLLWNNATVTTCHSKTAHLDEEVNKGDILVVATGQPEMVKGEWIKPGAIVI

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DCGINYVPDDKKPNGRKVVGDVAYDEAKERASFITVPGGVGPMTVAMLMQSTVE
 SAKRFLEKFKPGKWMIQYNNLNLKTPVPSDIDISRCKPKPIGKLAREIGLLSEEVELY
 GETKAKVLLSALERLKHDPGKYVVVTGITPTPLGEGKSTTTIGLVQALGAHLYQNVF
 ACVRQPSQGPTFGIKGGAAGGGYSQVIPMEEFNHLTGDIHAITAANNLVAAAIDARI
 FHELTQTDKALFNRLVPSVNGVRRFSDIQIRRLKRLGIEKTDPTTLTDEEINRFARLDI
 DPETITWQRVLDTNDRFLRKITIGQAPTEKGHTRTAQFDISVASEIMAVLALTTSLDM
 RERLGKMMVASSKKGEPVSAEDLGVSALTVMKDAIKPNLMQTLEGTPVFVHAGP
 FANIAHGNSSIIADQIALKLVGPEGFVVTEAGFGADIGMEKFFNIKCRYSGLCPHVVVL
 VATVRALKMHGGGPTVTAGLPLPKAYIQENLELVEKGFSNLKKQIENARMFGIPVVV
 AVNAFKTDTSELDLISRLSREHGAFDAVKCTHWAEGGKGALALAQAVQRAAQAPS
 SFQLLYDLKLPVEDKIRIIAQKIYGADDIELLPEAQHKADEVYTKQGFGNLPICMAKTHLS
 LSHNPEQKGVPTGFILPIRDIRASVGAGFLYPLVGTMTMPGLPTRPCFYDIDLDPET
 EQVNGLFTRTRPLEQKLISEEDLAANDILDYKDDDDKV

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

Stability Stable for 3 months from receipt of products under proper storage and handling conditions.

Storage Store at -80 centigrade. Avoid repeated freeze-thaw cycles.

Concentration 50 µg/mL as determined by BCA

Storage Buffer 100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name MTHFD1 methylenetetrahydrofolate dehydrogenase, cyclohydrolase and formyltetrahydrofolate synthetase 1 [Homo sapiens (human)]

Official Symbol MTHFD1

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Synonyms	MTHFD1; methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1, methenyltetrahydrofolate cyclohydrolase, formyltetrahydrofolate synthetase; MTHFC, MTHFD; C-1-tetrahydrofolate synthase, cytoplasmic; C1-THF synthase; cytoplasmic C-1-tetrahydrofolate synthase; 5,10-methylenetetrahydrofolate dehydrogenase, 5,10-methylenetetrahydrofolate cyclohydrolase, 10-formyltetrahydrofolate synthetase; MTHFC; MTHFD;
Gene ID	4522
mRNA Refseq	NM_005956
Protein Refseq	NP_005947
MIM	172460
UniProt ID	P11586
SDS-PAGE	