

# Recombinant Human MTHFD1

Cat. No. MTHFD1-29504TH Lot. No. (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant full length Human MTHFD1 with a N terminal proprietary tag: predicted MW 128.59 kDa.
<b>Species</b>	Human
<b>Source</b>	Wheat Germ
<b>ProteinLength</b>	935 amino acids
<b>Description</b>	<p>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.</p>
<b>Molecular Weight</b>	128.590kDa inclusive of tags
<b>Tissue specificity</b>	Ubiquitous.
<b>Form</b>	Liquid
<b>Purity</b>	Proprietary Purification

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<b>Storage buffer</b>	pH: 8.00 Constituents: 0.3% Glutathione, 0.79% Tris HCl
<b>Storage</b>	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
<b>Sequences of amino acids</b>	<p>MAPAEILNGKEISAQIRARLKNQVTQLKEQVPGFTPLAI LQVGNRDDSPLYINVKLK  AAEEIGIKATHIKLPRTTTESE VMKYITSLNEDSTVHGFLVQLPLDSENSINTEEVINAI  AP EKDVDGLTSINAGRLARGDLNDCFIPCTPKGCELIKETG VPIAGRHAVVVGRSK  IVGAPMHDLLLWNNATVTTCHSKTA HLDEEVNKGDILVVATGQPEMVKGEWIKPGAI  VIDCGINY VPDDKKPNGRKVVGDVAYDEAKERASFITVPPGGVGPMTV AMLMQST  VESAKRFLEKFKPGKWMIQYNNLNLKTPVPSDI DISRSCKPKPIGLAREIGLLSEEV  ELYGETKAKVLLSAL ERLKHRPDGKYVVVTGITPTPLGEGKSTTTIGLVQALGAH LY  QNVFACVRQPSQGPTFGIKGGAAGGGYSQVIPMEEFNL HLTGDIHAITAANNLVAA  AIDARIFHELTQTDKALFNRLV PSVNGVRRFSDIQIRRLKRLGIEKTDPTTLTDEEINR  FAR LDIDPETITWQRVLDTNRFLRKITIGQAPTEKGHTRTAQ FDISVASEIMAVLAL  TTSLEDMRERLGKMMVASSKKGEPV SAEDLGVSGALTVLMKDAIKPNLMQTLEGTP  VVFHAGPFA NIAHGNSSIIADQIALKLVGPEGFVVTEAGFGADIGMEKF FNIKCRYSG  LCPHVVVVLVATVRALKMHGGGPTVTAGLPLP KAYIQENLELVEKGFSNLKKQIENAR  MFGIPVVAVNAFK TDTESELDLISRLSREHGAFDAVKCTHWAEGGKALALAQ AV  QRAAQAPSSFQLLYDLKLPVEDKIRIIAQKIYGADDIE LLPEAQHKAEVYTKQGFGNL  PICMAKTHLSLSHNPEQKGV PTGFILPIRDIRASVGAGFLYPLVGTMTMSTMPGLPTRP  CFY DIDLDPETEQVNGLF</p>
<b>Sequence Similarities</b>	In the N-terminal section; belongs to the tetrahydrofolate dehydrogenase/cyclohydrolase family. In the C-terminal section; belongs to the formate--tetrahydrofolate ligase family.

## GENE INFORMATION

<b>Gene Name</b>	<b>MTHFD1 methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1,</b>
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	methenyltetrahydrofolate cyclohydrolase, formyltetrahydrofolate synthetase [ Homo sapiens ]
<b>Official Symbol</b>	<b>MTHFD1</b>
<b>Synonyms</b>	MTHFD1; methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1, methenyltetrahydrofolate cyclohydrolase, formyltetrahydrofolate synthetase; MTHFC, MTHFD; C-1-tetrahydrofolate synthase, cytoplasmic;
<b>Gene ID</b>	<b>4522</b>
<b>mRNA Refseq</b>	<b>NM_005956</b>
<b>Protein Refseq</b>	<b>NP_005947</b>
<b>Uniprot ID</b>	<b>P11586</b>
<b>Chromosome Location</b>	14q24
<b>Pathway</b>	C1-unit interconversion, eukaryotes, organism-specific biosystem; C1-unit interconversion, eukaryotes, conserved biosystem; Metabolic pathways, organism-specific biosystem; Metabolism, organism-specific biosystem; Metabolism of folate and pterines, organism-specific biosystem;
<b>Function</b>	ATP binding; formate-tetrahydrofolate ligase activity; hydrolase activity; ligase activity; methenyltetrahydrofolate cyclohydrolase activity;

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