

Recombinant Human MTHFD2, GST-tagged

Cat. No. MTHFD2-395H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human MTHFD2 (16 a.a. - 344 a.a.), fused with GST-tag at N-terminal, was expressed in Wheat Germ.

Species Human

Source Wheat Germ

ProteinLength 16-344 aa

Description This gene encodes a nuclear-encoded mitochondrial bifunctional enzyme with methylenetetrahydrofolate dehydrogenase and methenyltetrahydrofolate cyclohydrolase activities. The enzyme functions as a homodimer and is unique in its absolute requirement for magnesium and inorganic phosphate. Formation of the enzyme-magnesium complex allows binding of NAD. Alternative splicing results in two different transcripts, one protein-coding and the other not protein-coding. This gene has a pseudogene on chromosome 7.

Molecular Mass 61.93 kDa

AA Sequence

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SLRLRPFHLAAVRNEAVVISGRKLAQQIKQEVQRQEVEEWWASGNKRPHLSVILVGEN
PASHSYVLNKTRAAAVVG INSETIMKPASISEEELLNLINKLNNDNDVGLLVQLPLP
EHIDERRICNAVSPDKDVDGFHVINVGRMCLDQYS MLPATPWGVWEIIKRTGIPTLG
KNVVVAGRSKNVGMPIAMLLHTDGAHERPGGDATVTISHRYTPKEQLKKHTIL ADIVI
SAAGIPNLITADMIKEGAAVIDVGINRVHDPVTAKPKLVGDVDFEGVRQKAGYITPVP
GGVGPMTVAMLM KNTIIAAKKVLRLEEREVLKSKELGVATN
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Applications	ELSA; WB-Re; AP; Array
Storage	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
GENE INFORMATION	
Gene Name	MTHFD2 methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2, methenyltetrahydrofolate cyclohydrolase [Homo sapiens]
Official Symbol	MTHFD2
Synonyms	MTHFD2; methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2, methenyltetrahydrofolate cyclohydrolase; NMDMC; methylenetetrahydrofolate dehydrogenase 2; NAD-dependent methylene tetrahydrofolate dehydrogenase cyclohydrolase methylene tetrahydrofolate dehydrogenase (NAD+ dependent), methenyltetrahydrofolate cyclohydrolase; EC 1.5.1.15
Gene ID	10797
mRNA Refseq	NM_006636
Protein Refseq	NP_006627
MIM	604887
UniProt ID	P13995
Chromosome Location	2p13.1

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Pathway

C1-unit interconversion; Nucleotide Metabolism; One carbon pool by folate;
tetrahydrofolate salvage from 5,10-methenyltetrahydrofolate

Function

NOT formate-tetrahydrofolate ligase activity; magnesium ion binding;
methenyltetrahydrofolate cyclohydrolase activity

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