

Full-Length

MTHFD1 (Human) Recombinant Protein (P01)

Catalog # H00004522-P01

Size 25 ug, 10 ug

Applications



Specification

Product Description

Human MTHFD1 full-length ORF (AAH09806, 1 a.a. - 935 a.a.) recombinant protein with GST-tag at N-terminal.

Sequence

MAPAEILNGKEISAIQIRARLKNQVTQLKEQVPGFTPRLAILQVGNRDDSNLYINVKLKAAEEIGIKAT
HIKLPRTTTESEVMKYTSLNEDSTVHGFLVQLPLDSENSINTEEVINIAIPEKDVDGLTSINAGRLAR
GDLNDCFIPCTPKGCLELIKETGVPIAGRHAVVVGRSKIVGAPMHDLLLWNNATVTTCHSKTAHLD
EEVNBKGDILVVATGQPEMVKGGEWIKPGAVIDCGINYPDDKKPNGRKVVGDVAYDEAKERASFIT
PVPGGVGPMTVAMLMQSTVESAKRFLEKFKPGKWMQYNNLNLKTPVPSDIDISRCKPKPIGKL
AREIGLLSEVELYGETKAKVLLSALERLKHDPGKYVVVTGITPTPLGEGKSTTTIGLVQALGAHLY
QNVFACVRQPSQGPTFGIKGGAAGGGYSQVIPMEEFNLHLTGDIHAITAANNLVAAIDARIFHELT
QTDKALFNRLVPSVNGVRRFSDIQRRLKRLGIEKTDPTTLTDEEINRFARLDIDPETITWQRVLDTN
DRFLRKITIGQAPTEKGHTRTAQFDISVASEIMAVLALTTSLDMRERLGKMMVASSKKGEPVSAE
DLGVSGALTVLMKDAIKPNLMQTLEGTPVFVHAGPFANIAHGNSIIADQALKLVGPEGFVVTEAG
FGADIGMEKFFNIKCRYSGLCPHVVLVATVRALKMHGGGPTVTAGLPLPKAYIQENLELVEKGFS
NLKKQIENARMFGIPVVAVNAFKTDTESELDLISRLSREHGAFDAVKCTHWAEGGKGALALAQA
VQRAAQAPSSFQLLYDLKLPVEDKIRIIAQKIYGADDIELLPEAQHKADEVYTKQGFGNLPICMAKTHL
SLSHNPEQKGVPTGFILPDIRASVGAGFLYPLVGTMTSTMPGLPTRPCFYDIDLPETEQVNGLF

Host

Wheat Germ (in vitro)

Theoretical MW (kDa)

128.59

Preparation Method

[in vitro wheat germ expression system](#)

Purification	Glutathione Sepharose 4 Fast Flow
Quality Control Testing	12.5% SDS-PAGE Stained with Coomassie Blue.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Best use within three months from the date of receipt of this protein.

Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

Gene Info — MTHFD1

Entrez GeneID	4522
GeneBank Accession#	BC009806
Protein Accession#	AAH09806
Gene Name	MTHFD1
Gene Alias	MTHFC, MTHFD
Gene Description	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1, methenyltetrahydrofolate cyclohydrolase, formyltetrahydrofolate synthetase
Omim ID	172460 601634
Gene Ontology	Hyperlink

Gene Summary

This gene encodes a protein that possesses three distinct enzymatic activities, 5,10-methylenetetrahydrofolate dehydrogenase, 5,10-methylenetetrahydrofolate 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. [provided by RefSeq]

Other Designations

5,10-methylenetetrahydrofolate dehydrogenase, 5,10-methylenetetrahydrofolate cyclohydrolase, 10-formyltetrahydrofolate synthetase|C1-THF synthase|NADP-dependent cyclohydrolase/formyltetrahydrofolate synthetase|cytoplasmic C-1-tetrahydrofolate synthase|met

Pathway

- [Glyoxylate and dicarboxylate metabolism](#)
- [Metabolic pathways](#)
- [One carbon pool by folate](#)

Disease

- [Abortion](#)
- [Abruptio Placentae](#)
- [Adenocarcinoma](#)
- [Alzheimer disease](#)
- [Aortic Aneurysm](#)
- [Arthritis](#)
- [Atherosclerosis](#)
- [Bipolar Disorder](#)
- [Birth Weight](#)
- [Brain Ischemia](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)

- [Cardiovascular Diseases](#)
- [Cleft Lip](#)
- [Cleft Palate](#)
- [Colon cancer](#)
- [Colonic Neoplasms](#)
- [Colorectal Neoplasms](#)
- [Connective Tissue Diseases](#)
- [Diabetes Mellitus](#)
- [Disease Progression](#)
- [DNA Damage](#)
- [Ductus Arteriosus](#)
- [Edema](#)
- [Epilepsy](#)
- [Esophageal Neoplasms](#)
- [Exfoliation Syndrome](#)
- [Fetal Diseases](#)
- [Fetal Growth Retardation](#)
- [Folic Acid Deficiency](#)
- [Genetic Predisposition to Disease](#)
- [Glaucoma](#)
- [Heart Defects](#)
- [Hernia](#)
- [Hyperhomocysteinemia](#)
- [Infant](#)
- [Infection](#)

- [Inflammation](#)
- [Laryngeal Neoplasms](#)
- [Leukemia](#)
- [Lung carcinoma](#)
- [Lung Neoplasms](#)
- [Metabolic Diseases](#)
- [Microsatellite Instability](#)
- [Migraine Disorders](#)
- [Migraine with Aura](#)
- [Musculoskeletal Diseases](#)
- [Neoplasm Invasiveness](#)
- [Neoplasm Metastasis](#)
- [Neural Tube Defects](#)
- [Ovarian Neoplasms](#)
- [Parkinson disease](#)
- [Placental Insufficiency](#)
- [Pre-Eclampsia](#)
- [Pregnancy Complications](#)
- [Premature Birth](#)
- [Prostate cancer](#)
- [Prostatic Neoplasms](#)
- [Schizophrenia](#)
- [Skin Diseases](#)
- [Spinal Dysraphism](#)
- [Stomach Neoplasms](#)
- [Stroke](#)

- [Vertebral Artery Dissection](#)