Recombinant MTHFS protein (His tag)

Catalog Number	547034
Synonyms	5,10-methenyl-tetrahydrofolate synthetase; MTHFS; Methenyl-THF synthetase
Species	Human
Expression System	E. coli
Accession	P49914
Molecular Weight	Predictes a molecular mass of 24.78 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	2-203
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 2-203 aa (P49914) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Introducing the recombinant human 5-formyltetrahydrofolate cyclo-ligase (MTHFS) fragment (residues 2-203), a high-quality protein designed for structural and biochemical studies. This fragment represents a stable and soluble unit of the enzyme, which plays a key role in folate metabolism by catalyzing the irreversible conversion of 5-formyltetrahydrofolate to 5,10-methenyltetrahydrofolate, supporting essential cellular processes. 5-formyltetrahydrofolate cyclo-ligase (MTHFS) is a cytoplasmic enzyme critical for regulating carbon flow in the folate-dependent one-carbon metabolic network. This network supplies carbon for the biosynthesis of purines, thymidine, and amino acids, making MTHFS essential for nucleotide and protein synthesis. The enzyme catalyzes the irreversible conversion of 5-formyltetrahydrofolate (5-FTHF) to 5,10-methenyltetrahydrofolate, thereby maintaining metabolic balance and supporting cellular growth and division. Its role in folate metabolism underscores its importance in research related to cell proliferation, metabolic disorders, and drug development.