Recombinant FMT protein (His tag)

Catalog Number	547934
Synonyms	MtFMT
Species	Human
Expression System	E. coli
Accession	Q96DP5
Molecular Weight	Predictes a molecular mass of 40.84 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	41-389
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 41-389 aa (Q96DP5) 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	Recombinant Methionyl-tRNA Formyltransferase, Mitochondrial (MtFMT) Fragment (residues 41-389) is a high-quality protein product designed for structural and biochemical studies. This 349-amino acid fragment represents a stable, soluble unit of the enzyme, ideal for investigating mitochondrial translation initiation mechanisms. Methionyl-tRNA formyltransferase (MtFMT), encoded by the MTFMT gene in humans, catalyzes the formylation of methionyl-tRNA within mitochondria, a critical step for proper translation initiation in this organelle. Research has established its essential role in mitochondrial protein synthesis, with functional insights derived from studies such as those referenced in PubMed:21907147 and PubMed:25288793. The enzyme is localized exclusively to the mitochondrion, as confirmed by UniProtKB data, underscoring its importance in cellular energy production and metabolic regulation. This recombinant fragment enables focused analysis of MtFMT's catalytic and structural properties without interference from non-essential regions.