Recombinant EFMT3 protein (His tag)

Catalog Number	543350
Synonyms	Hepatocellular carcinoma-associated antigen 557a; Methyltransferase-like protein 21B; Protein-lysine methyltransferase METTL21B; eEF1A-KMT3
Species	Human
Expression System	E. coli
Accession	Q96AZ1
Molecular Weight	Predictes a molecular mass of 26.57 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	1-226
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-226 aa (Q96AZ1) 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 human EEF1A lysine methyltransferase 3 (METTL21B) fragment (residues 1-226), a highly pure protein designed for structural and biochemical studies. This fragment represents a stable, soluble domain ideal for investigating the enzyme's role in regulating mRNA translation through lysine methylation of elongation factors EEF1A1 and EEF1A2. EEF1A lysine methyltransferase 3 (METTL21B) is a cytoplasmic protein-lysine methyltransferase that specifically mono-, di-, and trimethylates Lys-165 of translation elongation factors EEF1A1 and EEF1A2 in an aminoacyl-tRNA and GTP-dependent manner. This methylation is dynamic and inducible under stress conditions such as ER-stress, playing a crucial regulatory role in mRNA translation. The enzyme localizes to the cytoplasm and centrosome, highlighting its involvement in fundamental cellular processes. The provided fragment (residues 1-226) encompasses key functional regions, enabling detailed mechanistic studies of its methyltransferase activity.