Recombinant TRMB protein (His tag)

Catalog Number	543807
Synonyms	guanine-N(7)-; Methyltransferase-like protein 1; mRNA (guanine-N(7)-)-methyltransferase; miRNA (guanine-N(7)-)-methyltransferase; tRNA (guanine(46)-N(7))-methyltransferase; tRNA(m7G46)-methyltransferase
Species	Human
Expression System	E. coli
Accession	Q9UBP6
Molecular Weight	Predictes a molecular mass of 33.00 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 33 kDa band.

Product Information

Sequence Region	2-276
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 2-276 aa (Q9UBP6) 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 METTL1 (tRNA (guanine-N(7)-)-methyltransferase) Fragment (aa 2-276) – a high-purity, stable protein fragment ideal for investigating RNA methylation mechanisms, structural studies, and enzyme activity assays. METTL1, encoded by the METTL1 gene in Homo sapiens, is the catalytic component of the METTL1-WDR4 methyltransferase complex. It mediates N(7)-methylguanine formation in various RNA species, including tRNAs, mRNAs, and microRNAs. Specifically, it catalyzes N(7)-methylguanine at position 46 (m7G46) in tRNAs with the 5'-RAGGU-3' motif, stabilizing tRNA tertiary structure and protecting against decay. METTL1 also methylates internal N(7)-guanine in mRNAs, promoting their relocalization to stress granules and suppressing translation under stress conditions, and methylates miRNAs like let-7 to facilitate processing by disrupting inhibitory structures in primary transcripts. Additionally, it plays a role in embryonic stem cell regulation. The protein is localized to the nucleus, underscoring its involvement in nuclear RNA modification processes.