Recombinant MTA70 protein (His tag)

Catalog Number	545328
Synonyms	6; Methyltransferase-like protein 3; hMETTL3; N(6)-adenosine-methyltransferase 70 kDa subunit; MT-A70
Species	Human
Expression System	E. coli
Accession	Q86U44
Molecular Weight	Predictes a molecular mass of 26.16 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	368-580
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 368-580 aa (Q86U44) 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 METTL3 (368-580) Fragment - A high-quality recombinant protein representing a stable and soluble 213-amino acid fragment of the catalytic N(6)-adenosine-methyltransferase subunit METTL3. This carefully selected fragment maintains structural integrity and is ideal for structural studies, biochemical characterization, and functional assays investigating RNA methylation mechanisms. METTL3 serves as the catalytic core of the METTL3-METTL14 heterodimer, forming a crucial N6-methyltransferase complex that methylates adenosine residues at the N(6) position in various RNA molecules. This enzyme plays fundamental roles in regulating mRNA stability, processing, translation efficiency, and editing through m6A modification at consensus 5'-[AG]GAC-3' sites. Beyond mRNA regulation, METTL3 mediates methylation of primary miRNAs, Xist RNA for X-chromosome inactivation, and participates in diverse biological processes including circadian rhythm regulation, stem cell differentiation, neurogenesis, spermatogenesis, DNA damage response, and immune regulation. The full-length protein localizes primarily to the nucleus and nuclear speckles, with additional cytoplasmic presence where it can function in translation initiation. This recombinant fragment provides researchers with a valuable tool for dissecting the structural and functional properties of this essential RNA-modifying enzyme.