Recombinant NSUN4 protein (His tag)

Catalog Number	540960
Synonyms	5-cytosine tRNA methyltransferase NSUN4; NOL1/NOP2/Sun domain family member 4; mRNA cytosine C(5)-methyltransferase NSUN4
Species	Human
Expression System	E. coli
Accession	Q96CB9
Molecular Weight	Predictes a molecular mass of 40.53 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	37-384
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 37-384 aa (Q96CB9) 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 NSUN4 (37-384) is a high-quality fragment of the human 5-cytosine rRNA methyltransferase NSUN4, designed for structural and biochemical studies. This 348-amino acid fragment offers a stable and soluble unit ideal for investigating mitochondrial RNA methylation, ribosome assembly, and innate immune regulation. NSUN4 is a mitochondrial RNA cytosine C(5)-methyltransferase that catalyzes the methylation of cytosine to 5-methylcytosine (m5C) in various RNAs, including rRNAs, mRNAs, and long non-coding RNAs (lncRNAs). It plays a critical role in mitochondrial ribosome small subunit maturation by methylating 12S rRNA and, in conjunction with MTERFD2/MTERF4, ensures proper assembly of ribosomal subunits. Additionally, NSUN4 regulates innate immunity by marking double-stranded mitochondrial RNAs generated under stress, promoting their degradation and limiting cytosolic release. The protein is exclusively localized to the mitochondrion, underscoring its importance in mitochondrial RNA metabolism and cellular stress responses.