Recombinant NSUN3 protein (His tag)

Catalog Number	545945
Synonyms	cytosine(34)-C(5); NOL1/NOP2/Sun domain family member 3
Species	Human
Expression System	E. coli
Accession	Q9H649
Molecular Weight	Predictes a molecular mass of 39.90 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	1-340
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 1-340 aa (Q9H649) 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 NSUN3 (NOL1/NOP2/Sun domain family member 3) protein fragment (amino acids 1-340), a mitochondrial tRNA methyltransferase essential for expanding codon recognition in mitochondrial translation through cytosine modification at the wobble position of mt-tRNA(Met). This stable, soluble fragment is ideal for structural studies and biochemical characterization. NSUN3 encodes a mitochondrial tRNA methyltransferase that catalyzes the methylation of cytosine to 5-methylcytosine (m5C) at position 34 of mitochondrial tRNA(Met). This modification occurs at the wobble position of the anticodon and serves as the initial step in forming 5-formylcytosine (f(5)c) at this position. The resulting modified mt-tRNA(Met) gains the ability to recognize both AUA and AUG codons, thereby expanding codon recognition capabilities during mitochondrial translation. The protein is localized to the mitochondrial matrix, where it performs this critical function in regulating mitochondrial gene expression and protein synthesis.