Recombinant RUSD3 protein (His tag)

Catalog Number	547510
Synonyms	RNA pseudouridylate synthase domain-containing protein 3
Species	Human
Expression System	E. coli
Accession	Q6P087
Molecular Weight	Predictes a molecular mass of 33.38 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 33 kDa band.

Product Information

Sequence Region	61-351
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 61-351 aa (Q6P087) 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 RPUSD3 Fragment (61-351) is a high-purity, soluble protein derived from human Mitochondrial mRNA Pseudouridine Synthase RPUSD3. This fragment is optimized for structural and biochemical studies, enabling researchers to investigate pseudouridylation mechanisms in mitochondrial mRNA modification and ribosome biogenesis. RPUSD3 (RNA pseudouridylate synthase domain-containing protein 3) is a human mitochondrial enzyme that catalyzes the isomerization of uridine to pseudouridine in specific mitochondrial mRNAs (mt-mRNAs), a critical post-transcriptional modification required for their translation. It targets positions such as 390 in COXI mt-mRNA and 697-699 in COXIII mt-mRNA. Additionally, RPUSD3 is part of a functional protein-RNA module involving proteins like RCC1L and TRUB2, which regulates 16S mitochondrial ribosomal RNA abundance and contributes to mitochondrial ribosome assembly. The protein localizes to the mitochondrial matrix and RNA granules, which serve as hubs for RNA modification and ribosome biogenesis. This recombinant fragment (residues 61-351) represents a stable, soluble region ideal for elucidating the structural and functional properties of RPUSD3 in mitochondrial gene expression and disease research.