Recombinant RF1ML protein (His tag)

Catalog Number	541469
Synonyms	Mitochondrial translational release factor 1-like; mtRF1a
Species	Human
Expression System	E. coli
Accession	Q9UGC7
Molecular Weight	Predictes a molecular mass of 41.41 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 44 kDa band.

Product Information

Sequence Region	35-380
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 35-380 aa (Q9UGC7) 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 Peptide Chain Release Factor 1-like (MTRF1L) Fragment (aa 35-380): A high-purity, stable protein fragment designed for mitochondrial translation termination studies. This 346-amino acid construct is optimized for solubility and structural analysis, enabling reliable investigation of UAA and UAG codon recognition mechanisms in mitochondrial protein synthesis. The full-length mitochondrial peptide chain release factor 1-like (mtRF1a), encoded by the MTRF1L gene, is a critical termination factor localized exclusively within the mitochondrion. It directs the cessation of mitochondrial translation by recognizing and responding to the peptide chain termination codons UAA and UAG, ensuring proper synthesis of mitochondrial-encoded proteins. This protein plays an essential role in maintaining mitochondrial function and cellular energy production, with implications for understanding mitochondrial diseases and translational regulation.