Recombinant ICT1 protein (His tag)

Catalog Number	540292
Synonyms	39S ribosomal protein L58, mitochondrial; MRP-L58; Digestion substraction 1; DS-1; Immature colon carcinoma transcript 1 protein; Peptidyl-tRNA hydrolase ICT1, mitochondrial
Species	Human
Expression System	E. coli
Accession	Q14197
Molecular Weight	Predictes a molecular mass of 21.13 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 21 kDa band.

Product Information

Sequence Region	38-206
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 38-206 aa (Q14197) 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 Large Ribosomal Subunit Protein mL62 (MRPL58) Fragment (residues 38-206) is a high-quality, stable protein fragment designed for structural and functional studies. This 169-amino acid fragment retains key properties of the full-length protein, making it ideal for investigating mitochondrial ribosome function, translation termination, and peptidyl-tRNA hydrolase activity in biochemical assays. The full-length Large Ribosomal Subunit Protein mL62 (MRPL58) is an essential mitochondrial protein with dual functions as a peptidyl-tRNA hydrolase (EC 3.1.1.29) and a codon-independent translation release factor. It resides exclusively in the mitochondrion, where it plays critical roles in mitochondrial protein synthesis by hydrolyzing peptidyl-tRNAs from prematurely terminated translation products and recycling stalled ribosomes. Additionally, it directs translation termination during abortive elongation events, making it vital for maintaining mitochondrial translational fidelity and energy production. This protein's involvement in fundamental mitochondrial processes underscores its importance in cellular metabolism and potential relevance to mitochondrial disorders.