# Recombinant RM18 protein (His tag)

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| **Catalog Number** | 543580 |
| **Synonyms** | 39S ribosomal protein L18, mitochondrial; L18mt; MRP-L18 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q9H0U6 |
| **Molecular Weight** | Predictes a molecular mass of 18.19 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band. |

## Product Information

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| **Sequence Region** | 38-180 |
| **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 38-180 aa (Q9H0U6) were fused with 6His tag. |

## Storage & Handling

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| **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.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Recombinant Human Large ribosomal subunit protein uL18m (MRPL18) Fragment (residues 38-180) is a stable and soluble protein fragment designed for structural and biochemical studies. This fragment represents a key region of the mitochondrial ribosomal protein, which plays a critical role in mitochondrial RNA import and ribosome assembly.<br>The full-length Large ribosomal subunit protein uL18m, encoded by the MRPL18 gene, is a mitochondrial protein essential for mitochondrial function. It acts together with thiosulfate sulfurtransferase (TST) as a mitochondrial import factor for cytosolic 5S rRNA, facilitating the folding of 5S rRNA into an import-competent conformation through its RNA chaperone activity. Both cytoplasmic and mitochondrial forms of the protein bind to the helix IV-loop D region in the gamma domain of 5S rRNA, underscoring its importance in ribosomal biogenesis and mitochondrial protein synthesis. The protein is localized to the mitochondrion, as confirmed by experimental evidence. |