Recombinant RL13A protein (His tag)

Catalog Number	537727
Synonyms	23 kDa highly basic protein; 60S ribosomal protein L13a
Species	Human
Expression System	E. coli
Accession	P40429
Molecular Weight	Predictes a molecular mass of 25.10 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	2-203
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 2-203 aa (P40429) 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 uL13 (RPL13A) fragment (amino acids 2-203) is a highly pure, stable protein designed for structural and biochemical studies. This 202-amino acid fragment retains key functional regions, offering researchers a reliable tool to investigate the protein's extra-ribosomal roles in translation regulation and inflammatory response pathways. The full-length Large ribosomal subunit protein uL13, encoded by the RPL13A gene in Homo sapiens, is a multifunctional protein associated with ribosomes but not essential for canonical ribosome activity. It plays critical extra-ribosomal roles, particularly as a component of the GAIT (gamma interferon-activated inhibitor of translation) complex. Upon interferon-gamma activation and phosphorylation, uL13 dissociates from ribosomes and assembles into the GAIT complex, which binds to GAIT elements in the 3'-UTR of inflammatory mRNAs (e.g., ceruloplasmin) to suppress their translation. This mechanism involves interaction with m7G cap-bound eIF4G, blocking recruitment of the 43S ribosomal complex and enabling transcript-selective translation inhibition during inflammation. Additionally, uL13 contributes to rRNA methylation. The protein is localized in the cytoplasm, where it performs these diverse functions in both ribosomal and regulatory contexts.