Recombinant LYAR protein (His tag)

Catalog Number	548382
Species	Human
Expression System	E. coli
Accession	Q9NX58
Molecular Weight	Predictes a molecular mass of 18.03 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	1-142
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 1-142 aa (Q9NX58) 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	Introducing the recombinant Cell growth-regulating nucleolar protein (LYAR) fragment (amino acids 1-142), a stable and soluble unit derived from human LYAR. This fragment is expertly designed for structural and biochemical studies, enabling researchers to explore the protein's roles in ribosome biogenesis, transcriptional regulation, and immune response modulation with high reliability. The full-length Cell growth-regulating nucleolar protein (LYAR), encoded by the LYAR gene in Homo sapiens (UniProt ID: Q9NX58), is a multifunctional protein primarily localized in the nucleus and nucleolus, with additional presence in the cytoplasm and photoreceptor outer segments. It plays a critical role in maintaining proper processing of pre-rRNAs to produce 18S and 28S ribosomal RNAs, essential for ribosome assembly. LYAR also functions in transcription regulation, notably repressing gamma-globin expression in conjunction with PRMT5 and suppressing oxidative stress genes in neuroblastoma cells. Furthermore, it negatively regulates the antiviral innate immune response by impairing IRF3 DNA-binding activity and inhibits NF-kappa-B-mediated pro-inflammatory cytokine expression. In retinal cells, it stimulates phagocytosis of photoreceptor outer segments, and in embryonic stem cells, it helps maintain nucleolin levels to support self-renewal. This recombinant fragment (1-142) represents a computationally optimized region for experimental applications, facilitating targeted investigations into these diverse biological processes without the complexities of the full-length protein.