Recombinant YRDC protein (His tag)

Catalog Number	540629
Synonyms	Dopamine receptor-interacting protein 3; Ischemia/reperfusion-inducible protein homolog; hIRIP
Species	Human
Expression System	E. coli
Accession	Q86U90
Molecular Weight	Predictes a molecular mass of 25.55 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	56-279
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 56-279 aa (Q86U90) 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 fragment of human Threonylcarbamoyl-AMP synthase (YRDC), encompassing the functional YrdC-like domain (residues 56-279). This high-purity protein is ideal for investigating tRNA modification mechanisms and enzyme activity studies in both cytoplasmic and mitochondrial contexts. Threonylcarbamoyl-AMP synthase (encoded by YRDC) is a bifunctional enzyme essential for post-transcriptional tRNA modification. It catalyzes the formation of threonylcarbamoyl-AMP (TC-AMP) from L-threonine, bicarbonate, and ATP, facilitating the critical t(6)A37 modification in tRNAs that decode adenine-starting codons. This modification ensures translational fidelity and efficiency. The protein localizes to both the cytoplasm and mitochondria, with a minor fraction associating peripherally with the cell membrane, where it may regulate transporter activity. Its role in tRNA maturation impacts fundamental cellular processes, making it a significant target for RNA biology and metabolic research.