Recombinant ERF3A protein (His tag)

Catalog Number	537547
Synonyms	Eukaryotic peptide chain release factor subunit 3a; eRF3a; G1 to S phase transition protein 1 homolog
Species	Human
Expression System	E. coli
Accession	P15170
Molecular Weight	Predictes a molecular mass of 49.72 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 52 kDa band.

Product Information

Sequence Region	72-499
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 72-499 aa (P15170) 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 GSPT1/ERF3A Fragment (aa 72-499) - A high-purity protein fragment encompassing the essential tr-type G domain of the eukaryotic peptide chain release factor GTP-binding subunit ERF3A. This fragment serves as an ideal tool for studying translation termination mechanisms, GTPase activity, and ribosome-associated functions in mammalian systems. The full-length Eukaryotic peptide chain release factor GTP-binding subunit ERF3A (GSPT1) is a crucial GTPase component of the eRF1-eRF3-GTP ternary complex that mediates translation termination in response to stop codons UAA, UAG, and UGA. This protein plays a fundamental role in protein synthesis by facilitating the recognition of termination signals and coordinating the proper conclusion of translation. Beyond its primary termination function, ERF3A participates in the transient SURF complex that recruits UPF1 to stalled ribosomes during nonsense-mediated decay (NMD) of mRNAs containing premature stop codons. Additionally, it is required for SHFL-mediated translation termination that inhibits programmed ribosomal frameshifting of viral and cellular mRNAs, highlighting its importance in maintaining translational fidelity and regulating gene expression.