Recombinant IF5 protein (His tag)

Catalog Number	540060
Synonyms	eIF-5
Species	Human
Expression System	E. coli
Accession	P55010
Molecular Weight	Predictes a molecular mass of 22.76 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	207-385
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 207-385 aa (P55010) 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	This recombinant protein product features a stable and soluble fragment (residues 207-385) of human Eukaryotic translation initiation factor 5 (eIF-5), encoded by the EIF5 gene. Designed for structural and biochemical studies, this fragment provides a reliable tool for investigating the mechanisms of eukaryotic translation initiation. Eukaryotic translation initiation factor 5 (eIF-5) is a critical component of the 43S pre-initiation complex (43S PIC), which binds to mRNA cap-proximal regions, scans the 5'-untranslated region, and locates the initiation codon. As a GTPase-activating protein, eIF-5 promotes GTP hydrolysis by eIF2G (EIF2S3) and interacts with EIF1 and EIF1A during scanning to maintain the open conformation of the 43S PIC. Upon start codon recognition, eIF-5 induces GTP hydrolysis and facilitates a conformational shift to a closed state, stabilizing the PIC and enabling translation initiation. This protein is localized in the cytoplasm, underscoring its role in cytoplasmic protein synthesis. The provided fragment (207-385) was computationally selected to represent a stable, soluble region ideal for experimental applications.