Recombinant IF2B protein (His tag)

Catalog Number	539827
Synonyms	Eukaryotic translation initiation factor 2 subunit beta; eIF2-beta
Species	Human
Expression System	E. coli
Accession	P20042
Molecular Weight	Predictes a molecular mass of 20.65 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 21 kDa band.

Product Information

Sequence Region	169-333
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 169-333 aa (P20042) 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 fragment of Eukaryotic translation initiation factor 2 subunit 2 (eIF2-beta), a key component in protein synthesis initiation. This product features a stable and soluble 165-amino acid fragment (residues 169-333), ideal for structural and biochemical studies, enabling researchers to explore critical mechanisms of translational regulation. Eukaryotic translation initiation factor 2 subunit 2 (eIF2-beta), encoded by the EIF2S2 gene in Homo sapiens, is an essential component of the eIF2 complex that plays a pivotal role in the early stages of protein synthesis. It functions by forming a ternary complex with GTP and initiator tRNA, which binds to the 40S ribosomal subunit. This interaction facilitates mRNA binding to form the 43S pre-initiation complex, a crucial step preceding the assembly of the 80S initiation complex. The eIF2 complex undergoes GTP hydrolysis, leading to the release of eIF2-GDP, and its recycling via eIF2B-catalyzed GDP-GTP exchange is vital for multiple rounds of translation initiation. The protein is localized in the cytoplasm and cytosol, underscoring its central role in cellular translational processes. The provided fragment, spanning residues 169-333, was selected for its stability and solubility, making it a valuable tool for investigating eIF2-beta's functional domains in research settings.