Recombinant EI2BG protein (His tag)

Catalog Number	543716
Synonyms	eIF2B GDP-GTP exchange factor subunit gamma
Species	Human
Expression System	E. coli
Accession	Q9NR50
Molecular Weight	Predictes a molecular mass of 28.30 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	1-237
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 1-237 aa (Q9NR50) 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 eIF2Bγ (EIF2B3) Fragment (1-237) - A highly stable and soluble protein fragment of the translation initiation factor eIF2B subunit gamma, specifically engineered for structural and biochemical studies of eukaryotic translation regulation. The full-length eIF2Bγ protein functions as an essential component of the eukaryotic translation initiation factor 2B (eIF2B) complex, which catalyzes the critical GDP-GTP exchange reaction on the eIF2 complex gamma subunit. This guanine nucleotide exchange activity is fundamental to translation initiation, as it regulates the availability of methionyl-initiator methionine tRNA to the ribosome. Importantly, when eIF2 complex is phosphorylated on its alpha subunit, eIF2B's exchange activity is repressed, leading to global translation inhibition - a key regulatory mechanism in cellular stress responses. The protein is localized to the cytoplasm and cytosol, where it performs its essential role in protein synthesis regulation.