Recombinant IF4E protein (His tag)

Catalog Number	533251
Synonyms	eIF-4F 25 kDa subunit; mRNA cap-binding protein
Species	Drosophila melanogaster
Expression System	E. coli
Accession	P48598
Gene ID	45525
Molecular Weight	Predictes a molecular mass of 23.10 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 24 kDa band.

Product Information

Sequence Region	75-259
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 75-259 aa (P48598) 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 Drosophila melanogaster Eukaryotic translation initiation factor 4E1 (eIF-4F 25 kDa subunit) fragment (residues 75-259), a stable and soluble protein unit ideal for structural studies and biochemical analysis of mRNA cap-binding function. Eukaryotic translation initiation factor 4E1 is a crucial mRNA cap-binding protein that recognizes and binds 7-methylguanosine-containing mRNA caps during the initiation of protein synthesis. This protein facilitates ribosome binding by unwinding mRNA secondary structures, playing a fundamental role in translation regulation. In Drosophila embryos, eIF4E1 forms complexes with other proteins to regulate maternal mRNA expression during the maternal-to-zygotic transition. The protein localizes to both cytoplasmic and nuclear compartments, including cytoplasmic ribonucleoprotein granules and nuclear bodies, reflecting its diverse functional roles in mRNA metabolism and translational control.