Recombinant IF4E2 protein (His tag)

Catalog Number	544148
Synonyms	eIF-4E type 2; eIF4E type 2; Eukaryotic translation initiation factor 4E homologous protein; Eukaryotic translation initiation factor 4E-like 3; eIF4E-like protein 4E-LP; mRNA cap-binding protein 4EHP; h4EHP; mRNA cap-binding protein type 3
Species	Human
Expression System	E. coli
Accession	O60573
Molecular Weight	Predictes a molecular mass of 24.93 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	45-245
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 45-245 aa (O60573) 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 Eukaryotic Translation Initiation Factor 4E Type 2 (eIF4E2) Fragment (residues 45-245) is a high-quality protein product designed for structural and biochemical studies. This 201-amino acid fragment represents a stable and soluble unit of eIF4E2, which plays a critical role in mRNA cap-binding and translation repression, offering researchers a reliable tool for investigating translational control mechanisms. Eukaryotic Translation Initiation Factor 4E Type 2 (eIF4E2) is a key regulatory protein that recognizes and binds the 7-methylguanosine-containing mRNA cap during translation initiation. Unlike its homolog EIF4E, eIF4E2 functions as a repressor of translation initiation by competing with EIF4E and preventing assembly of the eIF4F complex at the mRNA cap. It is a component of P-bodies where it promotes miRNA-mediated translational repression and plays a crucial role in virus-induced host responses by mediating MIR34A-induced silencing that controls IFNB1 production through negative feedback mechanisms. Additionally, eIF4E2 forms part of the 4EHP-GYF2 complex that assists ribosome-associated quality control by sequestering mRNA caps and blocking ribosome initiation. During SARS-CoV-2 infection, interaction with viral nsp2 enhances its association with GIGYF2, increasing repression of translation initiation for antiviral innate immune response genes. The protein localizes primarily to the cytoplasm and P-bodies, positioning it at critical sites of mRNA regulation and quality control.