Recombinant 4EBP2 protein (His tag)

Catalog Number	542636
Synonyms	4E-BP2; eIF4E-binding protein 2
Species	Human
Expression System	E. coli
Accession	Q13542
Molecular Weight	Predictes a molecular mass of 10.54 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	1-84
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 1-84 aa (Q13542) 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-Binding Protein 2 (4E-BP2) Fragment (residues 1-84) - A high-quality recombinant protein representing a stable and soluble unit of the key translational regulator 4E-BP2, ideal for structural studies and biochemical analyses of translation initiation mechanisms. Eukaryotic Translation Initiation Factor 4E-Binding Protein 2 (4E-BP2) is a crucial repressor of translation initiation that plays essential roles in synaptic plasticity, learning, and memory formation. This protein regulates EIF4E activity by preventing its assembly into the eIF4F complex: the hypophosphorylated form strongly binds to EIF4E and represses translation, while the hyperphosphorylated form dissociates from EIF4E, allowing translation initiation. 4E-BP2 is particularly enriched in the brain where it regulates synapse activity and neuronal stem cell renewal through its translation repression function. The protein also mediates translation regulation by hormones, growth factors, and stimuli signaling through MAP kinase and mTORC1 pathways. 4E-BP2 localizes to both the cytoplasm and nucleus, reflecting its broad regulatory functions in cellular protein synthesis control.