

## EIF4EBP2 Protein, Human (His)

<b>Cat. No.:</b>	HY-P70416
<b>Synonyms:</b>	rHuEukaryotic translation initiation factor 4E-binding protein 2/EIF4EBP2, His; Eukaryotic Translation Initiation Factor 4E-Binding Protein 2; 4E-BP2; eIF4E-Binding Protein 2; EIF4EBP2
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	Q13542 (M1-I120)
<b>Gene ID:</b>	1979
<b>Molecular Weight:</b>	Approximately 17.0 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>M S S S A G S G H Q    P S Q S R A I P T R    T V A I S D A A Q L    P H D Y C T T P G G</p> <p>T L F S T T P G G T    R I I Y D R K F L L    D R R N S P M A Q T    P P C H L P N I P G</p> <p>V T S P G T L I E D    S K V E V N N L N N    L N N H D R K H A V    G D D A Q F E M D I</p>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris-HCl, 150 mM NaCl, pH 8.0 .
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>EIF4EBP2, a repressor of translation initiation, plays a pivotal role in synaptic plasticity, learning, and memory formation. Acting as a key regulator of EIF4E activity, the hypophosphorylated form of EIF4EBP2 competes with EIF4G1/EIF4G3, forming a robust complex with EIF4E, thereby repressing translation. In contrast, the hyperphosphorylated form dissociates from EIF4E, enabling the interaction between EIF4G1/EIF4G3 and EIF4E, ultimately initiating translation. Enriched in the brain, EIF4EBP2 acts as a critical modulator of synapse activity and neuronal stem cell renewal, contributing to the regulation of protein translation in response to various signaling pathways, including MAP kinase and mTORC1. The intricate interplay between phosphorylation events and protein interactions underscores EIF4EBP2's multifaceted role in orchestrating cellular responses to external stimuli.</p>
-------------------	---

---

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA