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EIF4EBP2 Blocking Peptide (C-term)

Synthetic peptide
Catalog # BP19950b

Specification

EIF4EBP2 Blocking Peptide (C-term) - Product Information

Primary Accession	Q13542
Other Accession	NP_004087.1

EIF4EBP2 Blocking Peptide (C-term) - Additional Information

Gene ID 1979

Other Names
Eukaryotic translation initiation factor 4E-binding protein 2, 4E-BP2, eIF4E-binding protein 2, EIF4EBP2

Target/Specificity
The synthetic peptide sequence is selected from aa 102-115 of HUMAN EIF4EBP2

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

EIF4EBP2 Blocking Peptide (C-term) - Protein Information

Name EIF4EBP2 (HGNC:3289)

Function
Repressor of translation initiation involved in synaptic plasticity, learning and memory formation (PubMed:30765518). Regulates EIF4E activity by preventing its assembly into the eIF4F complex: hypophosphorylated form of EIF4EBP2 competes with EIF4G1/EIF4G3 and strongly binds to EIF4E, leading to repress translation. In contrast, hyperphosphorylated form dissociates from EIF4E, allowing interaction between EIF4G1/EIF4G3 and EIF4E, leading to initiation of translation (PubMed:30765518, PubMed:25533957). EIF4EBP2 is enriched in brain and acts as a regulator of synapse activity and neuronal stem cell renewal via its ability to repress translation initiation (By similarity). Mediates the regulation of protein translation by hormones, growth factors and other stimuli that signal through the MAP kinase and mTORC1 pathways (By similarity).

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Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:P70445}. Nucleus {ECO:0000250|UniProtKB:P70445}

EIF4EBP2 Blocking Peptide (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

EIF4EBP2 Blocking Peptide (C-term) - Images

EIF4EBP2 Blocking Peptide (C-term) - Background

This gene encodes a member of the eukaryotic translation initiation factor 4E binding protein family. The gene products of this family bind eIF4E and inhibit translation initiation. However, insulin and other growth factors can release this inhibition via a phosphorylation-dependent disruption of their binding to eIF4E. Regulation of protein production through these gene products have been implicated in cell proliferation, cell differentiation and viral infection.

EIF4EBP2 Blocking Peptide (C-term) - References

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Bidinosti, M., et al. J. Biol. Chem. 285(25):19402-19408(2010)
Johnatty, S.E., et al. PLoS Genet. 6 (7), E1001016 (2010) :
Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)
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