10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

EIF4E Blocking Peptide (N-term)

Synthetic peptide
Catalog # BP1954a

Specification

EIF4E Blocking Peptide (N-term) - Product Information

Primary Accession	P06730
Other Accession	P48597, P63074, P29338, P63073, Q9N0T5, Q9DFS6

EIF4E Blocking Peptide (N-term) - Additional Information

Gene ID 1977

Other Names
Eukaryotic translation initiation factor 4E, eIF-4E, eIF4E, eIF-4F 25 kDa subunit, mRNA cap-binding protein, EIF4E, EIF4EL1, EIF4F

Target/Specificity
The synthetic peptide sequence is selected from aa 47-61 of HUMAN EIF4E

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.

EIF4E Blocking Peptide (N-term) - Protein Information

Name EIF4E (HGNC:3287)

Synonyms EIF4EL1, EIF4F

Function

EIF4E Blocking Peptide (N-term) - Background

eIF4F is a multi-subunit complex, the composition of which varies with external and internal environmental conditions. It is composed of at least EIF4A, EIF4E and EIF4G1/EIF4G3. EIF4E is also known to interact with other partners. The interaction with EIF4ENIF1 mediates the import into the nucleus. Nonphosphorylated EIF4EBP1, EIF4EBP2 and EIF4EBP3 compete with EIF4G1/EIF4G3 to interact with EIF4E; insulin stimulated MAP-kinase (MAPK1 and MAPK3) phosphorylation of EIF4EBP1 causes dissociation of the complex allowing EIF4G1/EIF4G3 to bind and consequent initiation of translation. Rapamycin can attenuate insulin stimulation, mediated by FKBPs. this gene also interacts mutually exclusive with EIF4A1 and EIF4A2.

EIF4E Blocking Peptide (N-term) - References

Rychlik,W., J. Biol. Chem. 262 (22), 10434-10437 (1987)
Dorfman,J., Genomics 9 (4), 785-788 (1991)
Pelletier,J., Genomics 10 (4), 1079-1082 (1991)
Whalen,S.G., J. Biol. Chem. 271 (20), 11831-11837 (1996)

Recognizes and binds the 7-methylguanosine-containing mRNA cap during an early step in the initiation of protein synthesis and facilitates ribosome binding by inducing the unwinding of the mRNAs secondary structures (PubMed:16271312, PubMed:22578813). In addition to its role in translation initiation, also acts as a regulator of translation and stability in the cytoplasm (PubMed:24335285). Component of the CYFIP1-EIF4E-FMR1 complex which binds to the mRNA cap and mediates translational repression: in the complex, EIF4E mediates the binding to the mRNA cap (By similarity). Component of a multiprotein complex that sequesters and represses translation of proneurogenic factors during neurogenesis (By similarity). In P-bodies, component of a complex that mediates the storage of translationally inactive mRNAs in the cytoplasm and prevents their degradation (PubMed:24335285). May play an important role in spermatogenesis through translational regulation of stage-specific mRNAs during germ cell development (By similarity).

Cellular Location
Cytoplasm, P-body. Cytoplasm. Cytoplasm, Stress granule. Nucleus Note=Interaction with EIF4ENIF1/4E-T is required for localization to processing bodies (P-bodies) (PubMed:16157702, PubMed:24335285, PubMed:25923732). Imported in the nucleus via interaction with EIF4ENIF1/4E-T via a piggy-back mechanism (PubMed:10856257)

EIF4E Blocking Peptide (N-term) - Protocols

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

- Blocking Peptides