

**EIF1 Blocking Peptide (C-term)**  
**Synthetic peptide**  
**Catalog # BP21122a****Specification**

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**EIF1 Blocking Peptide (C-term) - Product Information**

Primary Accession [P41567](#)  
Other Accession [P48024](#), [P51971](#), [Q5E938](#)

**EIF1 Blocking Peptide (C-term) - Additional Information**

**Gene ID** 10209

**Other Names**

Eukaryotic translation initiation factor 1, eIF1, A121, Protein translation factor SUI1 homolog, Sui1iso1, EIF1, SUI1

**Target/Specificity**

The synthetic peptide sequence is selected from aa 100-113 of HUMAN EIF1

**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.

**EIF1 Blocking Peptide (C-term) - Protein Information**

**Name** EIF1

**Synonyms** SUI1

**Function**

Component of the 43S pre-initiation complex (43S PIC), which binds to the mRNA cap-proximal region, scans mRNA 5'-untranslated region, and locates the initiation codon (PubMed:<a href="http://www.uniprot.org/citations/9732867" target="\_blank">9732867</a>, PubMed:<a href="http://www.uniprot.org/citations/12435632" target="\_blank">12435632</a>, PubMed:<a href="http://www.uniprot.org/citations/14600024" target="\_blank">14600024</a>). Together with eIF1A (EIF1AX), EIF1 facilitates scanning and is essential for start codon recognition on the basis of AUG nucleotide context and location relative to the 5'-cap (PubMed:<a href="http://www.uniprot.org/citations/9732867" target="\_blank">9732867</a>, PubMed:<a href="http://www.uniprot.org/citations/12435632" target="\_blank">12435632</a>, PubMed:<a href="http://www.uniprot.org/citations/14600024" target="\_blank">14600024</a>). Participates to initiation codon selection by influencing the conformation of the 40S ribosomal subunit and the

positions of bound mRNA and initiator tRNA; this is possible after its binding to the interface surface of the platform of the 40S ribosomal subunit close to the P-site (PubMed:<a href="http://www.uniprot.org/citations/14600024" target="\_blank">14600024</a>). Together with eIF1A (EIF1AX), also regulates the opening and closing of the mRNA binding channel, which ensures mRNA recruitment, scanning and the fidelity of initiation codon selection (PubMed:<a href="http://www.uniprot.org/citations/9732867" target="\_blank">9732867</a>). Continuously monitors and protects against premature and partial base-pairing of codons in the 5'-UTR with the anticodon of initiator tRNA (PubMed:<a href="http://www.uniprot.org/citations/9732867" target="\_blank">9732867</a>, PubMed:<a href="http://www.uniprot.org/citations/12435632" target="\_blank">12435632</a>). Together with eIF1A (EIF1AX), acts for ribosomal scanning, promotion of the assembly of 48S complex at the initiation codon (43S PIC becomes 48S PIC after the start codon is reached), and dissociation of aberrant complexes (PubMed:<a href="http://www.uniprot.org/citations/9732867" target="\_blank">9732867</a>). Interacts with EIF4G1, which in a mutual exclusive interaction associates either with EIF1 or with EIF4E on a common binding site (PubMed:<a href="http://www.uniprot.org/citations/29987188" target="\_blank">29987188</a>). EIF4G1-EIF1 complex promotes ribosome scanning (on both short and long 5'UTR), leaky scanning (on short 5'UTR) which is the bypass of the initial start codon, and discrimination against cap-proximal AUG (PubMed:<a href="http://www.uniprot.org/citations/29987188" target="\_blank">29987188</a>). Is probably maintained within the 43S PIC in open conformation thanks to eIF1A-EIF5 interaction (PubMed:<a href="http://www.uniprot.org/citations/24319994" target="\_blank">24319994</a>). Once the correct start codon is reached, EIF1 is physically excluded from the decoding site, shifting the PIC into the closed conformation and arresting it at the start codon (PubMed:<a href="http://www.uniprot.org/citations/22813744" target="\_blank">22813744</a>).

#### **Cellular Location**

Cytoplasm.

#### **EIF1 Blocking Peptide (C-term) - Protocols**

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

- [Blocking Peptides](#)

#### **EIF1 Blocking Peptide (C-term) - Images**

#### **EIF1 Blocking Peptide (C-term) - Background**

Necessary for scanning and involved in initiation site selection. Promotes the assembly of 48S ribosomal complexes at the authentic initiation codon of a conventional capped mRNA.

#### **EIF1 Blocking Peptide (C-term) - References**

Fields C.A.,et al.Biochem. Biophys. Res. Commun. 198:288-291(1994).  
Singh S.K.,et al.Submitted (AUG-1998) to the EMBL/GenBank/DDBJ databases.  
Sheikh M.S.,et al.J. Biol. Chem. 274:16487-16493(1999).  
Mendell J.T.,et al.Mol. Cell. Biol. 20:8944-8957(2000).  
Gauci S.,et al.Anal. Chem. 81:4493-4501(2009).