

# **EEFSEC Antibody (C-term) Blocking Peptide**

Synthetic peptide Catalog # BP9077b

## **Specification**

#### **EEFSEC Antibody (C-term) Blocking Peptide - Product Information**

Primary Accession

P57772

## EEFSEC Antibody (C-term) Blocking Peptide - Additional Information

**Gene ID** 60678

#### **Other Names**

Selenocysteine-specific elongation factor, Elongation factor sec, Eukaryotic elongation factor, selenocysteine-tRNA-specific, EEFSEC, SELB

## **Target/Specificity**

The synthetic peptide sequence used to generate the antibody <a

href=/products/AP9077b>AP9077b</a> was selected from the C-term region of human EEFSEC. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

#### **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.

#### **EEFSEC Antibody (C-term) Blocking Peptide - Protein Information**

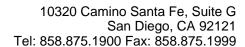
Name EEFSEC {ECO:0000303|PubMed:27708257, ECO:0000312|HGNC:HGNC:24614}

## **Function**

Translation factor required for the incorporation of the rare amino acid selenocysteine encoded by UGA codons (PubMed:<a href="http://www.uniprot.org/citations/27708257" http://www.uniprot.org/citations/27708257"

target="\_blank">27708257</a>, PubMed:<a href="http://www.uniprot.org/citations/35709277" target="\_blank">35709277</a>). Replaces the eRF1-eRF3-GTP ternary complex for the insertion of selenocysteine directed by the UGA codon (PubMed:<a

href="http://www.uniprot.org/citations/27708257" target="\_blank">27708257</a>, PubMed:<a href="http://www.uniprot.org/citations/35709277" target="\_blank">35709277</a>). Insertion of selenocysteine at UGA codons is mediated by SECISBP2 and EEFSEC: SECISBP2 (1) specifically binds the SECIS sequence once the 80S ribosome encounters an in-frame UGA codon and (2) contacts the RPS27A/eS31 of the 40S ribosome before ribosome stalling (PubMed:<a href="http://www.uniprot.org/citations/35709277" target="blank">35709277</a>). (3)





GTP-bound EEFSEC then delivers selenocysteinyl- tRNA(Sec) to the 80S ribosome and adopts a preaccommodated state conformation (PubMed:<a

href="http://www.uniprot.org/citations/35709277" target="\_blank">35709277</a>). (4) After GTP hydrolysis, EEFSEC dissociates from the assembly, selenocysteinyl-tRNA(Sec) accommodates, and peptide bond synthesis and selenoprotein elongation occur (PubMed:<a href="http://www.uniprot.org/citations/35709277" target=" blank">35709277</a>).

**Cellular Location** 

Cytoplasm. Nucleus.

## **EEFSEC Antibody (C-term) Blocking Peptide - Protocols**

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

• Blocking Peptides

**EEFSEC Antibody (C-term) Blocking Peptide - Images** 

EEFSEC Antibody (C-term) Blocking Peptide - Background

EEFSEC is a translation factor necessary for the incorporation of selenocysteine into proteins. It probably replaces EF-Tu for the insertion of selenocysteine directed by the UGA codon. SelB binds GTP and GDP.