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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 AP9077b 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:27708257, PubMed:35709277). Replaces the eRF1-eRF3-GTP ternary complex for the insertion of selenocysteine directed by the UGA codon (PubMed:27708257, PubMed:35709277). 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:35709277). (3)

GTP-bound EEFSEC then delivers selenocysteinyl- tRNA(Sec) to the 80S ribosome and adopts a preaccommodated state conformation (PubMed:35709277). (4) After GTP hydrolysis, EEFSEC dissociates from the assembly, selenocysteinyl-tRNA(Sec) accommodates, and peptide bond synthesis and selenoprotein elongation occur (PubMed:35709277).

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.