

SECISBP2 Antibody (Center) Blocking Peptide

Synthetic peptide

Catalog # BP14908c

Specification

SECISBP2 Antibody (Center) Blocking Peptide - Product Information

Primary Accession

[Q96T21](#)**SECISBP2 Antibody (Center) Blocking Peptide - Additional Information**

Gene ID 79048

Other Names

Selenocysteine insertion sequence-binding protein 2, SECIS-binding protein 2, SECISBP2, SBP2

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.

SECISBP2 Antibody (Center) Blocking Peptide - Protein Information

Name SECISBP2 {ECO:0000303|PubMed:19004874, ECO:0000312|HGNC:HGNC:30972}

Function

mRNA-binding protein that binds to the SECIS (selenocysteine insertion sequence) element present in the 3'-UTR of mRNAs encoding selenoproteins and facilitates the incorporation of the rare amino acid selenocysteine (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

[Isoform 1]: Nucleus.

Tissue Location

Expressed at high levels in testis.

SECISBP2 Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

SECISBP2 Antibody (Center) Blocking Peptide - Images

SECISBP2 Antibody (Center) Blocking Peptide - Background

The incorporation of selenocysteine into a protein requires the concerted action of an mRNA element called a secinsertion sequence (SECIS), a selenocysteine-specific translation elongation factor and a SECIS binding protein. With these elements in place, a UGA codon can be decoded as selenocysteine. The gene described in this record encodes a nuclear protein that functions as a SECIS binding protein. Mutations in this gene have been associated with a reduction in activity of a specific thyroxine deiodinase, a selenocysteine-containing enzyme, and abnormal thyroid hormone metabolism.

SECISBP2 Antibody (Center) Blocking Peptide - References

Meplan, C., et al. Carcinogenesis 31(6):1074-1079(2010) Papp, L.V., et al. Antioxid. Redox Signal. 12(7):797-808(2010) Di Cosmo, C., et al. J. Clin. Endocrinol. Metab. 94(10):4003-4009(2009) Olieric, V., et al. Biochimie 91(8):1003-1009(2009) Schomburg, L., et al. Thyroid 19(3):277-281(2009)