

Goat Anti-SBP2 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1961a**Specification**

Goat Anti-SBP2 Antibody - Product Information

Application	WB, IHC
Primary Accession	O96T21
Other Accession	NP_076982 , 79048
Reactivity	Human, Mouse
Predicted	Pig, Dog, Cow
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	95462

Goat Anti-SBP2 Antibody - Additional Information**Gene ID** 79048**Other Names**

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

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-SBP2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-SBP2 Antibody - 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.

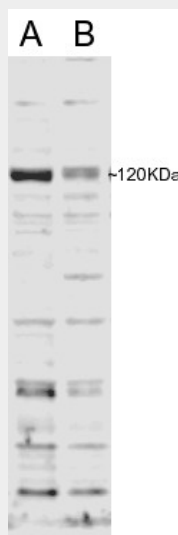
Tissue Location

Expressed at high levels in testis.

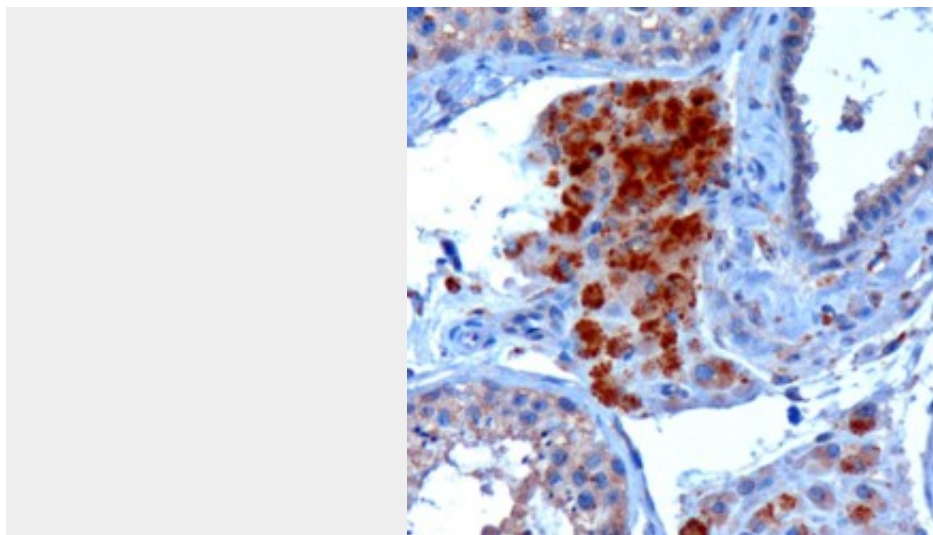
Goat Anti-SBP2 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Goat Anti-SBP2 Antibody - Images

AF1961a staining of HFF cell lysate with B) 100nM siRNA or A) control siRNA. Detected by chemiluminescence. Data kindly provided by Laura Papp and Kum Kum Khanna, Brisbane, Australia.



AF1961a (3 µg/ml) staining of paraffin embedded Human Testis. Microwaved antigen retrieval with Tris/EDTA buffer pH9, HRP-staining.

Goat Anti-SBP2 Antibody - Background

The incorporation of selenocysteine into a protein requires the concerted action of an mRNA element called a sec insertion 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.

Goat Anti-SBP2 Antibody - References

Genetic variants in selenoprotein genes increase risk of colorectal cancer. M \ddot{u} plan C, et al. Carcinogenesis, 2010 Jun. PMID 20378690.
SECIS-binding protein 2 promotes cell survival by protecting against oxidative stress. Papp LV, et al. Antioxid Redox Signal, 2010 Apr 1. PMID 19803747.
Clinical and molecular characterization of a novel selenocysteine insertion sequence-binding protein 2 (SBP2) gene mutation (R128X). Di Cosmo C, et al. J Clin Endocrinol Metab, 2009 Oct. PMID 19602558.
SECIS-binding protein 2, a key player in selenoprotein synthesis, is an intrinsically disordered protein. Oli \acute{e} ric V, et al. Biochimie, 2009 Aug. PMID 19467292.
Selenium supplementation fails to correct the selenoprotein synthesis defect in subjects with SBP2 gene mutations. Schomburg L, et al. Thyroid, 2009 Mar. PMID 19265499.