

STAU1 (D-5): sc-376123

BACKGROUND

STAU1 (staufer, RNA binding protein, homolog 1) is a 577 amino acid protein that contains three double-stranded RNA-binding domains and is a mammalian homolog of Staufen, a *Drosophila* protein that is involved in mRNA transport during oogenesis and zygotic development. Localized to the rough endoplasmic reticulum (RER) and expressed in a variety of tissues, including heart, brain, liver, lung, pancreas, kidney and placenta, STAU1 binds to both Tubulin and double-stranded RNA and is thought to play an important role in mRNA transport from the microtubule network to the RER. Additionally, STAU1 may be involved in cross-linking cytoskeletal components with RNA, an event that is important for proper mRNA positioning during translation. Alternative splicing of the STAU1 gene yields two STAU1 isoforms, designated short and long.

REFERENCES

1. DesGroseillers, L., et al. 1996. Localization of a human double-stranded RNA-binding protein gene (STAU) to band 20q13.1 by fluorescence *in situ* hybridization. *Genomics* 36: 527-529.
2. Wickham, L., et al. 1999. Mammalian staufer is a double-stranded-RNA- and Tubulin-binding protein which localizes to the rough endoplasmic reticulum. *Mol. Cell. Biol.* 19: 2220-2230.
3. Luo, M., et al. 2002. Molecular mapping of the determinants involved in human Staufer-ribosome association. *Biochem. J.* 365: 817-824.
4. Brendel, C., et al. 2004. Characterization of Staufer 1 ribonucleoprotein complexes. *Biochem. J.* 384: 239-246.
5. Kim, Y.K., et al. 2005. Mammalian Staufer 1 recruits Upf1 to specific mRNA 3'UTRs so as to elicit mRNA decay. *Cell* 120: 195-208.
6. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 601716. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: STAU1 (human) mapping to 20q13.13; Stau1 (mouse) mapping to 2 H3.

SOURCE

STAU1 (D-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 185-217 within an internal region of STAU1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376123 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

STAU1 (D-5) is recommended for detection of STAU1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for STAU1 siRNA (h): sc-76586, STAU1 siRNA (m): sc-153881, STAU1 shRNA Plasmid (h): sc-76586-SH, STAU1 shRNA Plasmid (m): sc-153881-SH, STAU1 shRNA (h) Lentiviral Particles: sc-76586-V and STAU1 shRNA (m) Lentiviral Particles: sc-153881-V.

Molecular Weight of STAU1 long isoform: 63 kDa.

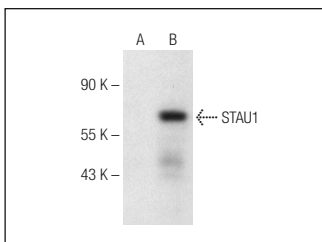
Molecular Weight of STAU1 short isoform: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, STAU1 (h2): 293T Lysate: sc-116129 or Jurkat whole cell lysate: sc-2204.

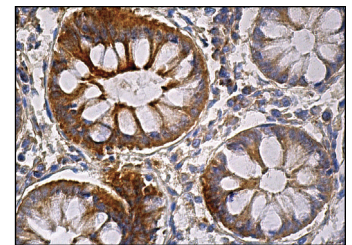
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BPHRP-FITC: sc-516140 or m-IgGκ BPHRP: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BPHRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



STAU1 (D-5): sc-376123. Western blot analysis of STAU1 expression in non-transfected: sc-117752 (A) and human STAU1 transfected: sc-116129 (B) 293T whole cell lysates.



STAU1 (D-5): sc-376123. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Iavello, A., et al. 2016. Role of Alix in miRNA packaging during extracellular vesicle biogenesis. *Int. J. Mol. Med.* 37: 958-966.

RESEARCH USE

For research use only, not for use in diagnostic procedures.