

# STAU1 (H-11): sc-390992

## BACKGROUND

STAU1 (staufen, 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. and Lemieux, N. 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 staufen 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 Staufen-ribosome association. *Biochem. J.* 365: 817-824.
4. Brendel, C., et al. 2004. Characterization of Staufen 1 ribonucleoprotein complexes. *Biochem. J.* 384: 239-246.
5. Kim, Y.K., et al. 2005. Mammalian Staufen1 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/>
7. Kim, Y.K., et al. 2007. Staufen1 regulates diverse classes of mammalian transcripts. *EMBO J.* 26: 2670-2681.
8. Fa-Hui, N., et al. 2008. Characterization of a novel transcript variant of human STAU1 gene. *Acta Biochim. Pol.* 55: 473-478.
9. Furic, L., et al. 2008. A genome-wide approach identifies distinct but overlapping subsets of cellular mRNAs associated with Staufen1- and Staufen2-containing ribonucleoprotein complexes. *RNA* 14: 324-335.

## CHROMOSOMAL LOCATION

Genetic locus: STAU1 (human) mapping to 20q13.13.

## SOURCE

STAU1 (H-11) is a mouse monoclonal antibody raised against amino acids 458-577 mapping at the C-terminus of STAU1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

STAU1 (H-11) is recommended for detection of STAU1 of human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

STAU1 (H-11) is also recommended for detection of STAU1 in additional species, including canine and porcine.

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

Molecular Weight of STAU1 long isoform: 63 kDa.

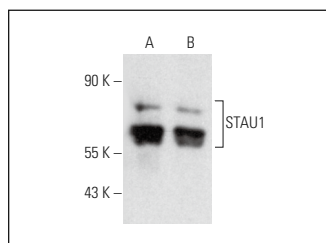
Molecular Weight of STAU1 short isoform: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, MDA-MB-231 cell lysate: sc-2232 or STAU1 (h2): 293T Lysate: sc-116129.

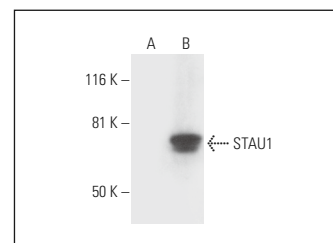
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (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 BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



STAU1 (H-11): sc-390992. Western blot analysis of STAU1 expression in Hep G2 (A) and MDA-MB-231 (B) whole cell lysates.



STAU1 (H-11): sc-390992. Western blot analysis of STAU1 expression in non-transfected: sc-117752 (A) and human STAU1 transfected: sc-116129 (B) 293T whole cell lysates.

## STORAGE

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

## RESEARCH USE

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