SANTA CRUZ BIOTECHNOLOGY, INC.

# STAU1 (C-4): sc-390820

## 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.


## CHROMOSOMAL LOCATION

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

## SOURCE

STAU1 (C-4) 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 IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

STAU1 (C-4) is recommended for detection of STAU1 of mouse, rat and 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 (C-4) 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 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.

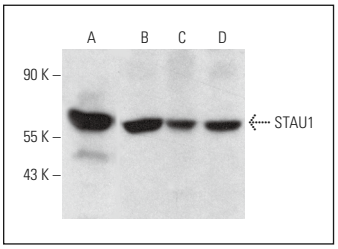
Molecular Weight of STAU1 short isoform: 55 kDa.

Positive Controls: STAU1 (h2): 293T Lysate: sc-116129, Hep G2 cell lysate: sc-2227 or NIH/3T3 whole cell lysate: sc-2210.

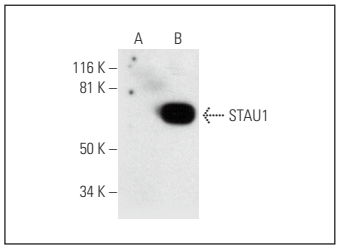
## RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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 (C-4): sc-390820. Western blot analysis of STAU1 expression in Hep G2 (**A**), NIH/3T3 (**B**), C3H/10T1/2 (**C**) and NRK (**D**) whole cell lysates.




STAU1 (C-4): sc-390820. Western blot analysis of STAU1 expression in non-transfected: sc-117752 (**A**) and human STAU1 transfected: sc-116129 (**B**) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Paul, S., et al. 2018. Staufen1 links RNA stress granules and autophagy in a model of neurodegeneration. Nat. Commun. 9: 3648.
2. Park, S., et al. 2023. The mammalian midbody and midbody remnant are assembly sites for RNA and localized translation. Dev. Cell 58: 1917-1932.e6.
3. Ito, S., et al. 2024. A testis-specific lncRNA functions as a post-transcriptional regulator of MDM2 and stimulates apoptosis of testicular germ cell tumor cells. Cell Death Discov. 10: 348.


## 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

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.