

SUN2 (S-16): sc-86894

BACKGROUND

SUN2 (Sad-1/UNC84 protein-like 2), also known as UNC84B (UNC84 homolog B), FRIGG, KIAA0668 or RAB5IP, is a 717 amino acid single-pass membrane protein that contains one SUN domain and localizes to the membrane of both the nucleus and the endosome. Widely expressed in a variety of tissues, including lung, muscle and heart, SUN2 interacts with Rab 5A and may play a role in homotypic endosome fusion. The gene encoding SUN2 maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, neurofibromatosis type 2, autism and schizophrenia. Additionally, translocations between chromosomes 9 and 22 may lead to the formation of the Philadelphia chromosome and the subsequent production of the novel fusion protein Bcr-Abl, a potent cell proliferation activator found in several types of leukemias.

REFERENCES

- Raff, J.W. 1999. The missing (L) UNC? *Curr. Biol.* 9: R708-R710.
- Hoffenberg, S., Liu, X., Nikolova, L., Hall, H.S., Dai, W., Baughn, R.E., Dickey, B.F., Barbieri, M.A., Aballay, A., Stahl, P.D. and Knoll, B.J. 2000. A novel membrane-anchored Rab 5 interacting protein required for homotypic endosome fusion. *J. Biol. Chem.* 275: 24661-24669.
- Sun, G., Yuen Chan, S., Yuan, Y., Wang Chan, K., Qiu, G., Sun, K. and Ping Leung, M. 2002. Isolation of differentially expressed genes in human heart tissues. *Biochim. Biophys. Acta* 1588: 241-246.
- Grønborg, M., Kristiansen, T.Z., Stensballe, A., Andersen, J.S., Ohara, O., Mann, M., Jensen, O.N. and Pandey, A. 2002. A mass spectrometry-based proteomic approach for identification of serine/threonine-phosphorylated proteins by enrichment with phospho-specific antibodies: identification of a novel protein, Frigg, as a protein kinase A substrate. *Mol. Cell. Proteomics* 1: 517-527.
- Schirmer, E.C., Florens, L., Guan, T., Yates, J.R. and Gerace, L. 2003. Nuclear membrane proteins with potential disease links found by subtractive proteomics. *Science* 301: 1380-1382.
- Wang, Q., Du, X., Cai, Z. and Greene, M.I. 2006. Characterization of the structures involved in localization of the SUN proteins to the nuclear envelope and the centrosome. *DNA Cell Biol.* 25: 554-562.
- Crisp, M., Liu, Q., Roux, K., Rattner, J.B., Shanahan, C., Burke, B., Stahl, P.D. and Hodzic, D. 2006. Coupling of the nucleus and cytoplasm: role of the LINC complex. *J. Cell Biol.* 172: 41-53.
- Pridgeon, J.W., Webber, E.A., Sha, D., Li, L. and Chin, L.S. 2009. Proteomic analysis reveals Hrs ubiquitin-interacting motif-mediated ubiquitin signaling in multiple cellular processes. *FEBS J.* 276: 118-131.

CHROMOSOMAL LOCATION

Genetic locus: SUN2 (human) mapping to 22q13.1; Sun2 (mouse) mapping to 15 E1.

RESEARCH USE

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

SOURCE

SUN2 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SUN2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86894 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SUN2 (S-16) is recommended for detection of SUN2 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SUN2 (S-16) is also recommended for detection of SUN2 in additional species, including bovine and porcine.

Suitable for use as control antibody for SUN2 siRNA (h): sc-76612, SUN2 siRNA (m): sc-153930, SUN2 shRNA Plasmid (h): sc-76612-SH, SUN2 shRNA Plasmid (m): sc-153930-SH, SUN2 shRNA (h) Lentiviral Particles: sc-76612-V and SUN2 shRNA (m) Lentiviral Particles: sc-153930-V.

Molecular Weight of SUN2: 80 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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