SANTA CRUZ BIOTECHNOLOGY, INC.

SUN2 (A-10): sc-515330

BACKGROUND

SUN2 (sad1/unc-84 protein-like 2), also known as UNC84B (unc-84 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

1. Raff, J.W. 1999. The missing (L) UNC? Curr. Biol. 9: R708-R710.
2. Hoffenberg, S., et al. 2000. A novel membrane-anchored Rab5 interacting protein required for homotypic endosome fusion. J. Biol. Chem. 275: 24661-24669.
3. Sun, G., et al. 2002. Isolation of differentially expressed genes in human heart tissues. Biochim. Biophys. Acta 1588: 241-246.

CHROMOSOMAL LOCATION

Genetic locus: SUN2 (human) mapping to 22q13.1.

SOURCE

SUN2 (A-10) is a mouse monoclonal antibody raised against amino acids 323-467 mapping within an internal region of SUN2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SUN2 (A-10) is recommended for detection of SUN2 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).

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

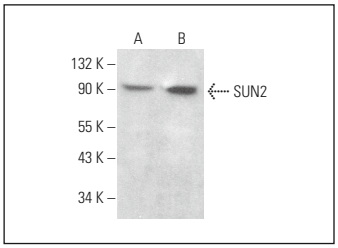
Molecular Weight of SUN2: 80 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

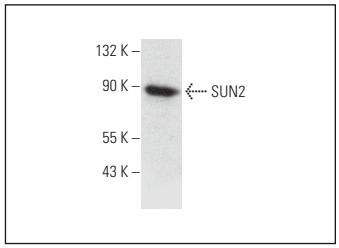
RECOMMENDED SUPPORT REAGENTS

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



SUN2 (A-10): sc-515330. Western blot analysis of SUN2 expression in Jurkat (**A**) and CCRF-CEM (**B**) whole cell lysates.



SUN2 (A-10): sc-515330. Western blot analysis of SUN2 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Santos, M.F., et al. 2019. Anti-human CD9 antibody Fab fragment impairs the internalization of extracellular vesicles and the nuclear transfer of their cargo proteins. J. Cell. Mol. Med. 23: 4408-4421.
2. Santos, M.F., et al. 2023. HIV-1-induced nuclear invaginations mediated by VAP-A, ORP3, and Rab7 complex explain infection of activated T cells. Nat. Commun. 14: 4588.
3. Carbone, D., et al. 2024. Triazole derivatives inhibit the VOR complex-mediated nuclear transport of extracellular particles: potential application in cancer and HIV-1 infection. Bioorg. Chem. 150: 107589.

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.