

# SUN1 (2D10): sc-293292

## BACKGROUND

UNC84A (UNC84 homolog A), also known as SUN1, is a multi-pass nuclear membrane protein that is involved in nuclear anchoring and migration. Highly expressed in heart, brain and testis, UNC84A functions as an A-type Lamin-binding protein that forms a link between the inner and outer nuclear envelope membranes. This link acts as a structural bridge between the nuclear interior and the Actin cytoskeleton and is essential for proper localization of nuclear envelope proteins. Additionally, UNC84A may be involved in telomere attachment and in normal testis development. UNC84A contains one UNC84 (SUN) domain and exists as four isoforms due to alternative splicing events.

## REFERENCES

1. Dreger, M., Bengtsson, L., Schöneberg, T., Otto, H. and Hucho, F. 2001. Nuclear envelope proteomics: novel integral membrane proteins of the inner nuclear membrane. *Proc. Natl. Acad. Sci. USA* 98: 11943-11948.
2. Bray, J.D., Chennathukuzhi, V.M. and Hecht, N.B. 2002. Identification and characterization of cDNAs encoding four novel proteins that interact with translin associated factor-X. *Genomics* 79: 799-808.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607723. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Padmakumar, V.C., Libotte, T., Lu, W., Zaim, H., Abraham, S., Noegel, A.A., Gotzmann, J., Foisner, R. and Karakesiosoglou, I. 2005. The inner nuclear membrane protein Sun1 mediates the anchorage of Nesprin-2 to the nuclear envelope. *J. Cell Sci.* 118: 3419-3430.
5. 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.
6. Hasan, S., Güttinger, S., Mühlhäusser, P., Anderegg, F., Bürgler, S. and Kutay, U. 2006. Nuclear envelope localization of human UNC84A does not require nuclear lamins. *FEBS Lett.* 580: 1263-1268.
7. Chi, Y.H., Haller, K. and Jeang, K.T. 2007. Histone acetyltransferase hALP and nuclear membrane protein hsSUN1 function in de-condensation of mitotic chromosomes. *J. Biol. Chem.* 282: 27447-27458.
8. Liu, Q., Pante, N., Misteli, T., Elsagga, M., Crisp, M., Hodzic, D., Burke, B. and Roux, K.J. 2007. Functional association of SUN1 with nuclear pore complexes. *J. Cell Biol.* 178: 785-798.

## CHROMOSOMAL LOCATION

Genetic locus: SUN1 (human) mapping to 7p22.3.

## SOURCE

SUN1 (2D10) is a mouse monoclonal antibody raised against amino acids 1-257 representing full length SUN1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SUN1 (2D10) is recommended for detection of SUN1 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

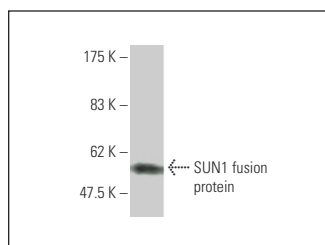
Suitable for use as control antibody for SUN1 siRNA (h): sc-106672, SUN1 shRNA Plasmid (h): sc-106672-SH and SUN1 shRNA (h) Lentiviral Particles: sc-106672-V.

Molecular Weight of SUN1: 100 kDa.

## 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).

## DATA



SUN1 (2D10): sc-293292. Western blot analysis of human recombinant SUN1 fusion protein.

## 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](http://www.scbt.com) for detailed protocols and support products.