

SUDD (RS-31): sc-100435

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. SUDD, also known as RIOK3 (RIO kinase 3), is a 519 amino acid protein that contains one protein kinase domain and belongs to the Ser/Thr protein kinase family. Expressed in a variety of tissues, SUDD catalyzes the ATP-dependent phosphorylation of target proteins, thereby influencing signaling events throughout the cell. SUDD is expressed as two isoforms due to alternative splicing events.

REFERENCES

- Bairoch, A. and Claverie, J.M. 1988. Sequence patterns in protein kinases. *Nature* 331: 22.
- Hanks, S.K., Quinn, A.M. and Hunter, T. 1988. The protein kinase family: conserved features and deduced phylogeny of the catalytic domains. *Science* 241: 42-52.
- Hanks, S.K. and Quinn, A.M. 1991. Protein kinase catalytic domain sequence database: identification of conserved features of primary structure and classification of family members. *Meth. Enzymol.* 200: 38-62.
- Anaya, P., Evans, S.C., Dai, C., Lozano, G. and May, G.S. 1998. Isolation of the *Aspergillus nidulans* SUDD gene and its human homologue. *Gene* 211: 323-329.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603579. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Kimura, K., Wakamatsu, A., Suzuki, Y., Ota, T., Nishikawa, T., Yamashita, R., Yamamoto, J., Sekine, M., Tsuritani, K., Wakaguri, H., Ishii, S., Sugiyama, T., Saito, K., Isono, Y., Irie, R., Kushida, N., Yoneyama, T., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. *Genome Res.* 16: 55-65.

CHROMOSOMAL LOCATION

Genetic locus: RIOK3 (human) mapping to 18q11.2; Riok3 (mouse) mapping to 18 A1.

SOURCE

SUDD (RS-31) is a mouse monoclonal antibody raised against recombinant SUDD of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

SUDD (RS-31) is recommended for detection of SUDD of mouse, rat and 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 SUDD siRNA (h): sc-76602, SUDD siRNA (m): sc-153915, SUDD shRNA Plasmid (h): sc-76602-SH, SUDD shRNA Plasmid (m): sc-153915-SH, SUDD shRNA (h) Lentiviral Particles: sc-76602-V and SUDD shRNA (m) Lentiviral Particles: sc-153915-V.

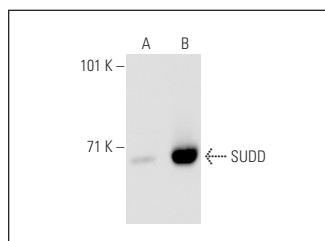
Molecular Weight of SUDD: 60 kDa.

Positive Controls: SUDD (h): 293T Lysate: sc-115492, HeLa whole cell lysate: sc-2200 or SUDD (m): 293T Lysate: sc-123833.

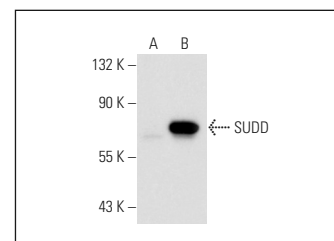
RECOMMENDED SUPPORT REAGENTS

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



SUDD (RS-31): sc-100435. Western blot analysis of SUDD expression in non-transfected: sc-117752 (A) and human SUDD transfected: sc-115492 (B) 293T whole cell lysates.



SUDD (RS-31): sc-100435. Western blot analysis of SUDD expression in non-transfected: sc-117752 (A) and mouse SUDD transfected: sc-123833 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Weinberg, F., Reischmann, N., Fauth, L., Taromi, S., Mastroianni, J., Köhler, M., Halbach, S., Becker, A.C., Deng, N., Schmitz, T., Uhl, F.M., Herbener, N., Riedel, B., Beier, F., Swarbrick, A., Lassmann, S., Dengjel, J., Zeiser, R. and Brummer, T. 2017. The atypical kinase RIOK1 promotes tumor growth and invasive behavior. *EBioMedicine* 20: 79-97.

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.