SANTA CRUZ BIOTECHNOLOGY, INC.

SUGT1 (B-3): sc-398639

BACKGROUND

SUGT1 (suppressor of G_2 allele of Skp1 p19 homolog, *S. cerevisiae),* also known as SGT1, is a homolog of the yeast protein Sgt1, a regulator of the cell cycle that is essential for G_1/S and G_2/M transitions. SUGT1 is a highly soluble protein and shares 26% overall amino acid identity and 30% overall similarity with its yeast counterpart. Localizing to the nucleus and cytoplasm, SUGT1 contains a CS domain, a SGS domain, a p23 domain and three tetratricopeptide repeats (TPR). The function of SUGT1 is conserved across eukaryotes. SUGT1 associates with Skp1 p19 and CUL1, subunits of the SCF (Skp1-Cullin-F-box) ubiquitin ligase complex, and is believed to play a role in protein degradation. In addition, SUGT1 is required for the assembly of kinetochores and functions as a co-chaperone for HSP 90. An additional isoform, SUGT1B (also known as SGT1B), exists for SUGT1 due to alternative splicing events.

REFERENCES

1. Kitagawa, K., et al. 1999. SGT1 encodes an essential component of the yeast kinetochore assembly pathway and a novel subunit of the SCF ubiquitin ligase complex. Mol. Cell 4: 21-33.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604098. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Niikura, Y. and Kitagawa, K. 2003. Identification of a novel splice variant: human SGT1B (SUGT1B). DNA Seq. 14: 436-441.
4. Steensgaard, P., et al. 2004. SGT1 is required for human kinetochore assembly. EMBO Rep. 5: 626-631.
5. Zou, X., et al. 2004. Molecular cloning and characterization of SGT1.2, a novel splice variant of *Homo sapiens* SGT1. DNA Seq. 15: 140-143.
6. So, T., et al. 2005. Haplotype loss of HLA class I antigen as an escape mechanism from immune attack in lung cancer. Cancer Res. 65: 5945-5952.
7. Spiechowicz, M. and Filipek, A. 2005. The expression and function of SGT1 protein in eukaryotic cells. Acta Neurobiol. Exp. 65: 161-165.
8. Spiechowicz, M., et al. 2006. Density of SGT1-immunopositive neurons is decreased in the cerebral cortex of Alzheimer's disease brain. Neurochem. Int. 49: 487-493.
9. Niikura, Y., et al. 2006. 17-AAG, an Hsp90 inhibitor, causes kinetochore defects: a novel mechanism by which 17-AAG inhibits cell proliferation. Oncogene 25: 4133-4146.

CHROMOSOMAL LOCATION

Genetic locus: SUGT1 (human) mapping to 13q14.3; Sugt1 (mouse) mapping to 14 D3.

SOURCE

SUGT1 (B-3) is a mouse monoclonal antibody raised against amino acids 141-365 mapping at the C-terminus of SUGT1 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

SUGT1 (B-3) is recommended for detection of SUGT1 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).

Suitable for use as control antibody for SUGT1 siRNA (h): sc-76605, SUGT1 siRNA (m): sc-153916, SUGT1 shRNA Plasmid (h): sc-76605-SH, SUGT1 shRNA Plasmid (m): sc-153916-SH, SUGT1 shRNA (h) Lentiviral Particles: sc-76605-V and SUGT1 shRNA (m) Lentiviral Particles: sc-153916-V.

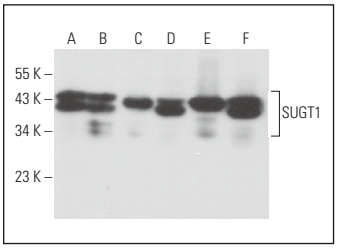
Molecular Weight of SUGT1: 38 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Jurkat whole cell lysate: sc-2204 or NIH/3T3 whole cell lysate: sc-2210.

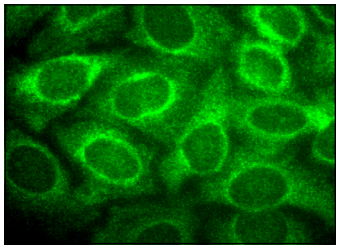
RECOMMENDED SUPPORT REAGENTS

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 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



SUGT1 (B-3): sc-398639. Western blot analysis of SUGT1 expression in A-431 (**A**), Jurkat (**B**), NIH/3T3 (**C**), Caco-2 (**D**), F9 (**E**) and HEL 92.1.7 (**F**) whole cell lysates.



SUGT1 (B-3): sc-398639. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.