



SUGT1 (m): 293 Lysate: sc-110740

BACKGROUND

SUGT1 (suppressor of G₂ 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 G₁/S and G₂/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, an SGS domain, a p23 domain and three tetrapeptide repeats (TPR). The function of SUGT1 is conserved across eukaryotes. SUGT1 associates with Skp1 p19 and CUL-1, 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., Skowrya, D., Elledge, S.J., Harper, J.W. and Hieter, P. 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., Garrè, M., Muradore, I., Transidico, P., Nigg, E.A., Kitagawa, K., Earnshaw, W.C., Fareta, M. and Musacchio, A. 2004. SGT1 is required for human kinetochore assembly. *EMBO Rep.* 5: 626-631.
5. Zou, X., Ji, C., Wang, L., Wu, M., Zheng, H., Xu, J., Jin, F., Gu, S., Ying, K., Xie, Y. and Mao, Y. 2004. Molecular cloning and characterization of SGT1.2, a novel splice variant of *Homo sapiens* SGT1. *DNA Seq.* 15: 140-143.
6. So, T., Takenoyama, M., Mizukami, M., Ichiki, Y., Sugaya, M., Hanagiri, T., Sugio, K. and Yasumoto, K. 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., Bernstein, H.G., Dobrowolny, H., Lesniak, W., Mawrin, C., Bogerts, B., Kuznicki, J. and Filipek, A. 2006. Density of SGT1-immunopositive neurons is decreased in the cerebral cortex of Alzheimer's disease brain. *Neurochem. Int.* 49: 487-493.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Sugt1 (mouse) mapping to 14 D3.

PRODUCT

SUGT1 (m): 293 Lysate represents a lysate of mouse SUGT1 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

SUGT1 (m): 293 Lysate is suitable as a Western Blotting positive control for mouse reactive SUGT1 antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

RESEARCH USE

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