SANTA CRUZ BIOTECHNOLOGY, INC.

RRS1 (m): 293T Lysate: sc-110288

BACKGROUND

RRS1 [RRS1 ribosome biogenesis regulator homolog (*S. cerevisiae*)], also known as KIAA0112, ribosome biogenesis regulatory protein homolog, regulator of ribosome synthesis 1, ribosome biogenesis regulatory protein RRS1 homolog or RRR, is a 365 amino acid protein belonging to the RRS1 family. RRS1 shows nucleolar localization and is involved in both ribosome biogenesis and chromosome congression. Recent studies indicate that in the absence of RRS1, cells experience mitotic delay due to abnormal spindle organization and chromosome alignment. The gene encoding RRS1 maps to human chromosome 8q13.1. Consisting of nearly 146 million base pairs, chromosome 8 encodes over 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that map to chromosome 8.

REFERENCES

1. Tsuno, A., et al. 2000. RRS1, a conserved essential gene, encodes a novel regulatory protein required for ribosome biogenesis in *Saccharomyces cerevisiae*. Mol. Cell. Biol. 20: 2066-2074.
2. Kashino, G., et al. 2001. Preferential expression of an intact WRN gene in Werner syndrome cell lines in which a normal chromosome 8 has been introduced. Biochem. Biophys. Res. Commun. 289: 111-115.
3. Andersen, J.S., et al. 2002. Directed proteomic analysis of the human nucleolus. Curr. Biol. 12: 1-11.
4. Selicorni, A., et al. 2002. Cytogenetic mapping of a novel locus for type II Waardenburg syndrome. Hum. Genet. 110: 64-67.
5. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. Am. J. Hum. Genet. 77: 582-595.
6. Andersen, J.S., et al. 2005. Nucleolar proteome dynamics. Nature 433: 77-83.
7. Mossafa, H., et al. 2006. Non-Hodgkin's lymphomas with Burkitt-like cells are associated with c-Myc amplification and poor prognosis. Leuk. Lymphoma 47: 1885-1893.
8. Gambe, A.E., et al. 2009. A nucleolar protein RRS1 contributes to chromosome congression. FEBS Lett. 583: 1951-1956.

CHROMOSOMAL LOCATION

Genetic locus: Rrs1 (mouse) mapping to 1 A2.

PRODUCT

RRS1 (m): 293T Lysate represents a lysate of mouse RRS1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

RRS1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive RRS1 antibodies. Recommended use: 10-20 µl per lane.

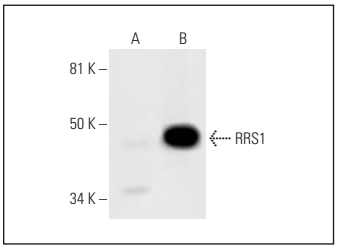
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RRS1 (B-7): sc-393746 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse RRS1 expression in RRS1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

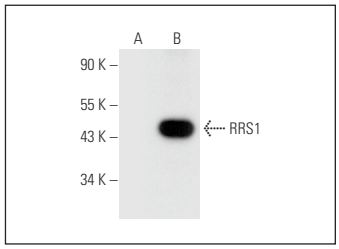
RECOMMENDED SUPPORT REAGENTS

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.

DATA



RRS1 (B-7): sc-393746. Western blot analysis of RRS1 expression in non-transfected: sc-117752 (**A**) and mouse RRS1 transfected: sc-110288 (**B**) 293T whole cell lysates.



RRS1 (G-2): sc-398748. Western blot analysis of RRS1 expression in non-transfected: sc-117752 (**A**) and mouse RRS1 transfected: sc-110288 (**B**) 293T whole cell lysates.

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.