SANTA CRUZ BIOTECHNOLOGY, INC.

RRS1 (H-5): sc-515462

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: RRS1 (human) mapping to 8q13.1; Rrs1 (mouse) mapping to 1 A2.

SOURCE

RRS1 (H-5) is a mouse monoclonal antibody raised against amino acids 205-266 mapping within an internal region of RRS1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RRS1 (H-5) is available conjugated to agarose (sc-515462 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515462 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515462 PE), fluorescein (sc-515462 FITC), Alexa Fluor® 488 (sc-515462 AF488), Alexa Fluor® 546 (sc-515462 AF546), Alexa Fluor® 594 (sc-515462 AF594) or Alexa Fluor® 647 (sc-515462 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515462 AF680) or Alexa Fluor® 790 (sc-515462 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

RRS1 (H-5) is recommended for detection of RRS1 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 RRS1 siRNA (h): sc-77521, RRS1 siRNA (m): sc-153134, RRS1 shRNA Plasmid (h): sc-77521-SH, RRS1 shRNA Plasmid (m): sc-153134-SH, RRS1 shRNA (h) Lentiviral Particles: sc-77521-V and RRS1 shRNA (m) Lentiviral Particles: sc-153134-V.

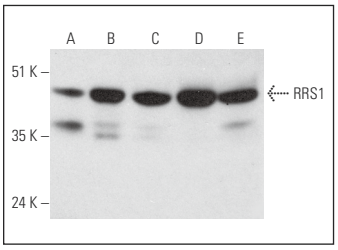
Molecular Weight of RRS1: 41 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, MCF7 whole cell lysate: sc-2206 or K-562 whole cell lysate: sc-2203.

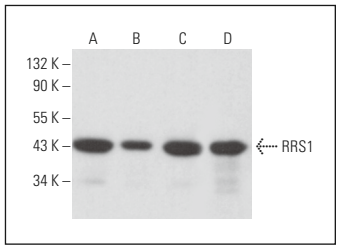
RECOMMENDED SUPPORT REAGENTS

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



RRS1 (H-5): sc-515462. Western blot analysis of RRS1 expression in HL-60 (**A**) and HeLa (**B**) nuclear extracts and MCF7 (**C**), K-562 (**D**) and HT-29 (**E**) whole cell lysates.



RRS1 (H-5): sc-515462. Western blot analysis of RRS1 expression in HeLa nuclear extract (**A**) and Hep G2 (**B**), Caco-2 (**C**) and C6 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Božic, J., et al. 2022. Interactome screening of C9orf72 dipeptide repeats reveals VCP sequestration and functional impairment by polyGA. Brain 145: 684-699.

STORAGE

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

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