SANTA CRUZ BIOTECHNOLOGY, INC.

RSU1 (1C6): sc-517140

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The Power to Question

BACKGROUND

RSU1 (Ras suppressor protein 1), also known as RSP1, is a 277 amino acid protein that is highly conserved and ubiquitously expressed in mammalian cells. RSU1 contains 7 LRR (leucine-rich repeats) which are responsible for the protein-binding function of RSU1. RSU1 may play a role in the Ras signal transduction pathway, as well as in growth inhibition and in the nerve-growth factor-induced differentiation processes. It has been suggested that RSU1 is capable of suppressing v-Ras transformation in mice. RSU1 binds to the LIM 5 domain of Pinch-1 (particularly interesting new Cys-His protein 1) and colocalizes to focal adhesions of cells. There are multiple alternatively spliced transcript variants that exists, one of which is found only in glioma tumors.

REFERENCES

1. Tsuda, T., et al. 1993. Human RSU1 is highly homologous to mouse RSU-1 and localizes to human chromosome 10. Genomics 18: 461-462.
2. Tsuda, T., et al. 1995. The Ras suppressor RSU-1 localizes to 10p13 and its expression in the U251 glioblastoma cell line correlates with a decrease in growth rate and tumorigenic potential. Oncogene 11: 397-403.
3. Masuelli, L., et al. 1996. Increased expression of the Ras suppressor RSU-1 enhances Erk-2 activation and inhibits Jun kinase activation. Mol. Cell. Biol. 16: 5466-5476.
4. Masuelli, L., et al. 1999. The Ras suppressor, RSU-1, enhances nerve growth factor-induced differentiation of PC12 cells and induces $p21^{CIP}$ expression. Cell Growth Differ. 10: 555-564.
5. Vasaturo, F., et al. 2000. Ectopic expression of RSU-1 results in elevation of $p21^{CIP}$ and inhibits anchorage-independent growth of MCF7 breast cancer cells. Breast Cancer Res. Treat. 61: 69-78.
6. Chunduru, S., et al. 2002. Identification of an alternatively spliced RNA for the Ras suppressor RSU-1 in human gliomas. J. Neurooncol. 60: 201-211.
7. Kadrmas, J.L., et al. 2004. The integrin effector PINCH regulates JNK activity and epithelial migration in concert with Ras suppressor 1. J. Cell Biol. 167: 1019-1024.
8. Dougherty, G.W., et al. 2005. The Ras suppressor RSU-1 binds to the LIM 5 domain of the adaptor protein PINCH1 and participates in adhesion-related functions. Exp. Cell Res. 306: 168-179.
9. Dougherty, G.W., et al. 2008. The RSU-1-PINCH1-ILK complex is regulated by Ras activation in tumor cells. Eur. J. Cell Biol. 87: 721-734.

CHROMOSOMAL LOCATION

Genetic locus: RSU1 (human) mapping to 10p13; Rsu1 (mouse) mapping to 2 A1.

SOURCE

RSU1 (1C6) is a mouse monoclonal antibody raised against amino acids 1-277 representing full length RSU1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

RSU1 (1C6) is recommended for detection of RSU1 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 RSU1 siRNA (h): sc-90735, RSU1 siRNA (m): sc-153162, RSU1 shRNA Plasmid (h): sc-90735-SH, RSU1 shRNA Plasmid (m): sc-153162-SH, RSU1 shRNA (h) Lentiviral Particles: sc-90735-V and RSU1 shRNA (m) Lentiviral Particles: sc-153162-V.

Molecular Weight of full-length RSU1: 33 kDa.

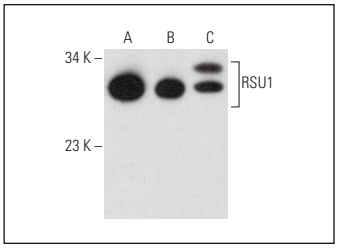
Molecular Weight of truncated RSU1: 29 kDa.

Positive Controls: human platelet extract: sc-363773, human bladder extract: sc-363751 or H19-7/IGF-IR whole cell lysate.

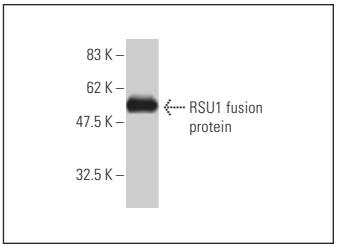
RECOMMENDED SUPPORT REAGENTS

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



RSU1 (1C6): sc-517140. Western blot analysis of RSU1 expression in human platelet (**A**) and human bladder (**B**) tissue extracts and H19-7/IGF-IR whole cell lysate (**C**).



RSU1 (1C6): sc-517140. Western blot analysis of human recombinant RSU1 fusion protein.

STORAGE

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

PROTOCOLS

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