SANTA CRUZ BIOTECHNOLOGY, INC.

Rtn-2 (PL-A9): sc-134431

BACKGROUND

The Reticulon (Rtn) family consists of four members: Rtn-1 (also designated neuroendocrine-specific protein or NSP), Rtn-2 (also designated NSP-like-1), Rtn-3 (also designated NSP-like-2) and Nogo (also designated Rtn-4A). Reticulon proteins are anchored to the membranes of the endoplasmic reticulum through their common C-terminal regions. Localized on human chromosome 14q23.1, the gene encoding Rtn-1 is expressed as three isoforms: Rtn-1A (NSP-A), Rtn-1B (NSP-B) and Rtn-1C (NSP-C). The gene encoding human Rtn-2 is located on chromosome 19q13.32 and also encodes three isoforms. Rtn-2-A and Rtn-2-C are produced by the use of alternative initiation sites, whereas Rtn-2-B is an alternative splice variant of the Rtn-2-A isoform. Rtn-2-A and Rtn-2-B are highly expressed in brain, while Rtn-2-C is primarily expressed in skeletal muscle.

REFERENCES

1. Senden, N.H., et al. 1994. Subcellular localization and supramolecular organization of neuroendocrine-specific protein B (NSP-B) in small cell lung cancer. Eur. J. Cell Biol. 65: 341-353.
2. van de Velde, H.J., et al. 1994. NSP-encoded reticulons are neuroendocrine markers of a novel category in human lung cancer diagnosis. Cancer Res. 54: 4769-4776.
3. Geisler, J.G., et al. 1998. Molecular cloning of a novel mouse gene with predominant muscle and neural expression. Mamm. Genome 9: 274-282.
4. Roebroek, A.J., et al. 1998. cDNA cloning, genomic organization, and expression of the human RTN2 gene, a member of a gene family encoding reticulons. Genomics 51: 98-106.
5. Hens, J., et al. 1998. Neuronal differentiation is accompanied by NSP-C expression. Cell Tissue Res. 292: 229-237.
6. Moreira, E.F., et al. 1999. Cloning of a novel member of the reticulon gene family (RTN3): gene structure and chromosomal localization to 11q13. Genomics 58: 73-81.
7. GrandPre, T., et al. 2000. Identification of the Nogo inhibitor of axon regeneration as a reticulon protein. Nature 403: 439-444.

CHROMOSOMAL LOCATION

Genetic locus: RTN2 (human) mapping to 19q13.32.

SOURCE

Rtn-2 (PL-A9) is a mouse monoclonal antibody raised against recombinant Rtn-2 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Rtn-2 (PL-A9) is recommended for detection of Rtn-2 of 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 Rtn-2 siRNA (h): sc-42218, Rtn-2 shRNA Plasmid (h): sc-42218-SH and Rtn-2 shRNA (h) Lentiviral Particles: sc-42218-V.

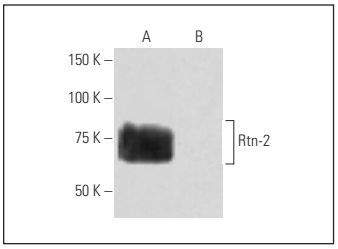
Molecular Weight of Rtn-2: 58 kDa.

Positive Controls: human Rtn-2 transfected 293T 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



Rtn-2 (PL-A9): sc-134431. Western blot analysis of Rtn-2 expression in human Rtn-2 transfected (**A**) and non-transfected (**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.