

Rtn-1 (R-14): sc-22367

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). 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), which are produced by alternative splicing, are anchored to the endoplasmic reticulum in neural and neuroendocrine tissues and cells, and may be involved in neuroendocrine secretion or in membrane trafficking. In lung cancer diagnosis, Rtn-1A appears to be a reliable marker for the detection of neuroendocrine differentiation, since most of the small cell lung carcinoma (SCLC) and carcinoid tumors show expression of Rtn-1A. Rtn-1B exists as multiple forms. Expression of Rtn-1C strongly correlates with neuronal differentiation.

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.

CHROMOSOMAL LOCATION

Genetic locus: RTN1 (human) mapping to 14q23.1; Rtn1 (mouse) mapping to 12 C3.

SOURCE

Rtn-1 (R-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rtn-1 of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22367 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

Rtn-1 (R-14) is recommended for detection of Rtn-1 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

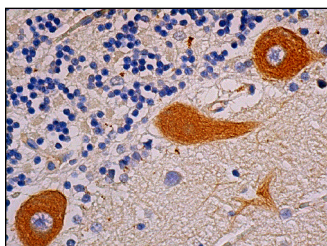
Suitable for use as control antibody for Rtn-1 siRNA (h): sc-42216, Rtn-1 siRNA (m): sc-42217, Rtn-1 shRNA Plasmid (h): sc-42216-SH, Rtn-1 shRNA Plasmid (m): sc-42217-SH, Rtn-1 shRNA (h) Lentiviral Particles: sc-42216-V and Rtn-1 shRNA (m) Lentiviral Particles: sc-42217-V.

Molecular Weight of Rtn-1: 100 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Rtn-1 (R-14): sc-22367. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells.

PROTOCOLS

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

MONOS
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Try **Rtn-1A (Mon 160): sc-23880** or **Rtn-1A (4A66): sc-71980**, our highly recommended monoclonal alternatives to Rtn-1 (R-14).