

# Rtn-3 (C-19): sc-16687

## 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 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. The human Rtn-3 gene is located on chromosome 11q13.1 and is widely expressed, with the highest expression being in brain.

## 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: RTN3 (human) mapping to 11q13.1; Rtn3 (mouse) mapping to 19 A.

## SOURCE

Rtn-3 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rtn-3 of human 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-16687 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Rtn-3 (C-19) is recommended for detection of Rtn-3 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Rtn-3 (C-19) is also recommended for detection of Rtn-3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Rtn-3 siRNA (h): sc-42219, Rtn-3 siRNA (m): sc-42220, Rtn-3 shRNA Plasmid (h): sc-42219-SH, Rtn-3 shRNA Plasmid (m): sc-42220-SH, Rtn-3 shRNA (h) Lentiviral Particles: sc-42219-V and Rtn-3 shRNA (m) Lentiviral Particles: sc-42220-V. Positive Controls: IMR-32 cell lysate: sc-2409.

Molecular Weight (predicted) of Rtn-3 isoforms: 113/111/26/28/26 kDa.

Molecular Weight (observed) of Rtn-3: 115 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.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Rtn-3 (F-6): sc-374599**, our highly recommended monoclonal alternative to Rtn-3 (C-19).