

Rtn-1/2 (RNL-2): sc-23881

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

REFERENCES

- 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.
- 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.
- Geisler, J.G., et al. 1998. Molecular cloning of a novel mouse gene with predominant muscle and neural expression. *Mamm. Genome* 9: 274-282.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: RTN1 (human) mapping to 14q23.1, RTN2 (human) mapping to 19q13.32.

SOURCE

Rtn-1/2 (RNL-2) is a mouse monoclonal antibody raised against the small cell lung cancer cell line NCI-H82.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rtn-1/2 (RNL-2) is available conjugated to agarose (sc-23881 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23881 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23881 PE), fluorescein (sc-23881 FITC), Alexa Fluor® 488 (sc-23881 AF488), Alexa Fluor® 546 (sc-23881 AF546), Alexa Fluor® 594 (sc-23881 AF594) or Alexa Fluor® 647 (sc-23881 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-23881 AF680) or Alexa Fluor® 790 (sc-23881 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Rtn-1/2 (RNL-2) is recommended for detection of Rtn-1 and Rtn-2 of human, rabbit and Rhesus monkey origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Rtn-1: 100 kDa.

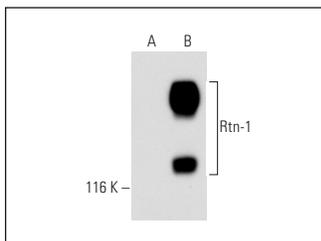
Molecular Weight of Rtn-2: 58 kDa.

Positive Controls: Rtn-1 (h): 293T Lysate: sc-111610.

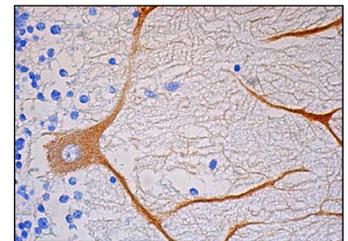
RECOMMENDED SUPPORT REAGENTS

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



Rtn-1/2 (RNL-2): sc-23881. Western blot analysis of Rtn-1 expression in non-transfected: sc-117752 (A) and human Rtn-1 transfected: sc-111610 (B) 293T whole cell lysates.



Rtn-1/2 (RNL-2): sc-23881. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216.

SELECT PRODUCT CITATIONS

- Goodwin, E.C., et al. 2014. Expression of DNAJB12 or DNAJB14 causes coordinate invasion of the nucleus by membranes associated with a novel nuclear pore structure. *PLoS ONE* 9: e94322.

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.