

Rtn-3 (F-6): sc-374599

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

CHROMOSOMAL LOCATION

Genetic locus: RTN3 (human) mapping to 11q13.1.

SOURCE

Rtn-3 (F-6) is a mouse monoclonal antibody raised against amino acids 1-90 mapping at the N-terminus of Rtn-3 of human origin.

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-3 (F-6) is available conjugated to agarose (sc-374599 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374599 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374599 PE), fluorescein (sc-374599 FITC), Alexa Fluor® 488 (sc-374599 AF488), Alexa Fluor® 546 (sc-374599 AF546), Alexa Fluor® 594 (sc-374599 AF594) or Alexa Fluor® 647 (sc-374599 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374599 AF680) or Alexa Fluor® 790 (sc-374599 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Rtn-3 (F-6) is recommended for detection of Rtn-3 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for Rtn-3 siRNA (h): sc-42219, Rtn-3 shRNA Plasmid (h): sc-42219-SH and Rtn-3 shRNA (h) Lentiviral Particles: sc-42219-V.

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

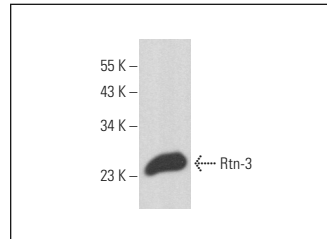
Molecular Weight (observed) of Rtn-3: 115 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411 or IMR-32 cell lysate: sc-2409.

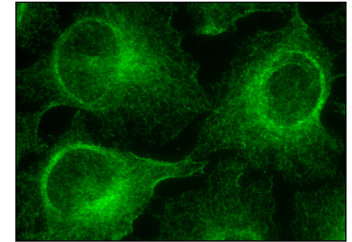
STORAGE

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

DATA



Rtn-3 (F-6): sc-374599. Western blot analysis of Rtn-3 expression in U-87 MG whole cell lysate.



Rtn-3 (F-6): sc-374599. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Doerflinger, S.Y., et al. 2017. Membrane alterations induced by nonstructural proteins of human norovirus. *PLoS Pathog.* 13: e1006705.
- Gilljam, K.M., et al. 2020. Differential effects of reactive oxygen species on IgG versus IgM levels in TLR-stimulated B cells. *J. Immunol.* 204: 2133-2142.
- Mignard, V., et al. 2020. Sphingolipids distribution at mitochondria-associated membranes (MAM) upon induction of apoptosis. *J. Lipid Res.* 61: 1025-1037.
- Cerikan, B., et al. 2020. A non-replicative role of the 3' terminal sequence of the dengue virus genome in membranous replication organelle formation. *Cell Rep.* 32: 107859.
- Nthiga, T.M., et al. 2020. CALCOCO1 acts with VAMP-associated proteins to mediate ER-phagy. *EMBO J.* 39: e103649.
- Cortese, M., et al. 2020. Integrative imaging reveals SARS-CoV-2-induced reshaping of subcellular morphologies. *Cell Host Microbe* 28: 853-866.e5.
- Goellner, S., et al. 2020. Replication-independent generation and morphological analysis of flavivirus replication organelles. *STAR Protoc.* 1: 100173.
- Wu, H. and Voeltz, G.K. 2021. Reticulon-3 promotes endosome maturation at ER membrane contact sites. *Dev. Cell* 56: 52-66.e7.
- Lalier, L., et al. 2021. TOM20-mediated transfer of Bcl2 from ER to MAM and mitochondria upon induction of apoptosis. *Cell Death Dis.* 12: 182.
- Parashar, S., et al. 2021. Endoplasmic reticulum tubules limit the size of misfolded protein condensates. *Elife* 10: e71642.
- Sawaged, S., et al. 2022. TBK1 and GABARAP family members suppress coxsackievirus B infection by limiting viral production and promoting autophagic degradation of viral extracellular vesicles. *PLoS Pathog.* 18: e1010350.

RESEARCH USE

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