

# RIM-BP2 (N-14): sc-169181

## BACKGROUND

RIMS-binding proteins (RIM-BPs) serve as adaptors during vesicle fusion and release by forming links between synaptic-vesicle fusion apparatuses and calcium channels. Specifically, RIM-BP2 (RIMS binding protein 2), also known as RBP2, is a 1,052 amino acid protein that links L-type Ca<sup>2+</sup> CP  $\alpha$ 1D, N-type Ca<sup>2+</sup> CP  $\alpha$ 1B, Rim1 and Rim2 during synaptic transmission. RIM-BP2 contains three fibronectin type-III domains and three SH3 domains, which are used to mediate binding to a proline-rich motifs. Existing as three alternatively spliced isoforms, RIM-BP2 is encoded by a gene that maps to human chromosome 12q24.33 and mouse chromosome 5 G1.3.

## REFERENCES

1. Nagase, T., Ishikawa, K., Nakajima, D., Ohira, M., Seki, N., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 1997. Prediction of the coding sequences of unidentified human genes. VII. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 4: 141-150.
2. Wang, Y., Sugita, S. and Sudhof, T.C. 2000. The RIM/NIM family of neuronal C2 domain proteins. Interactions with Rab3 and a new class of Src homology 3 domain proteins. J. Biol. Chem. 275: 20033-20044.
3. Kaeser, P.S. and Südhof, T.C. 2005. RIM function in short- and long-term synaptic plasticity. Biochem. Soc. Trans. 33: 1345-1349.
4. Mittelstaedt, T. and Schoch, S. 2007. Structure and evolution of RIM-BP genes: identification of a novel family member. Gene 403: 70-79.
5. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 611602. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Mittelstaedt, T., Alvarez-Baron, E. and Schoch, S. 2010. RIM proteins and their role in synapse function. Biol. Chem. 391: 599-606.

## CHROMOSOMAL LOCATION

Genetic locus: RIMBP2 (human) mapping to 12q24.33; Rimbp2 (mouse) mapping to 5 G1.3.

## SOURCE

RIM-BP2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of RIM-BP2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-169181 P, (100  $\mu$ g 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.

## APPLICATIONS

RIM-BP2 (N-14) is recommended for detection of RIM-BP2 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); non cross-reactive with RIM-BP3.

RIM-BP2 (N-14) is also recommended for detection of RIM-BP2 in additional species, including equine and canine.

Suitable for use as control antibody for RIM-BP2 siRNA (h): sc-96212, RIM-BP2 siRNA (m): sc-152962, RIM-BP2 shRNA Plasmid (h): sc-96212-SH, RIM-BP2 shRNA Plasmid (m): sc-152962-SH, RIM-BP2 shRNA (h) Lentiviral Particles: sc-96212-V and RIM-BP2 shRNA (m) Lentiviral Particles: sc-152962-V.

Molecular Weight of RIM-BP2 isoforms: 116/70/21 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.

## 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.