Rim3 (S-13): sc-131775



The Power to Question

BACKGROUND

Rab 3, a neural/neuroendocrine-specific member of the Rab family, is involved in Ca²⁺-regulated exocytosis and functions in an inhibitory capacity, controlling the recruitment and pooling of secretory vesicles at the plasma membrane. The Rim (Rab 3 interacting molecule) family of proteins (Rim1, Rim2, Rim3 and Rim4) are multidomain adaptors that regulate Rab 3 activity and subsequent neurotransmitter release. Rim3, also known as RIMS3 (regulating synaptic membrane exocytosis 3) or NIM3, is a 308 amino acid member of the Rim family. Localized to the synapse and to cell junctions, Rim3 contains one C2 domain and is thought to play an important role in the regulation of synaptic membrane exocytosis. Rim3, a protein that may be phosphorylated upon DNA damage, is expressed throughout the body with highest levels present in brain tissue.

REFERENCES

- Coppola, T., Perret-Menoud, V., Luthi, S., Farnsworth, C.C., Glomset, J.A. and Regazzi, R. 1999. Disruption of Rab 3-calmodulin interaction, but not other effector interactions, prevents Rab 3 inhibition of exocytosis. EMBO J. 18: 5885-5891.
- Wang, Y., Sugita, S. and Sudhof, T.C. 2000. The Rim/NIM family of neuronal C2 domain proteins. Interactions with Rab 3 and a new class of Src homology 3 domain proteins. J. Biol. Chem. 275: 20033-20044.
- Haynes, L.P., Evans, G.J., Morgan, A. and Burgoyne, R.D. 2001. A direct inhibitory role for the Rab3-specific effector, NOC2, in Ca²⁺-regulated exocytosis in neuroendocrine cells. J. Biol. Chem. 27: 9726-9732.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611600. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 5. Wang, Y. and Südhof, T.C. 2003. Genomic definition of Rim proteins: evolutionary amplification of a family of synaptic regulatory proteins. Genomics 81: 126-137.
- Liang, F., Zhang, B., Tang, J., Guo, J., Li, W., Ling, E.A., Chu, H., Wu, Y., Chan, Y.G. and Cao, Q. 2007. Rim3γ is a postsynaptic protein in the rat central nervous system. J. Comp. Neurol. 503: 501-510.
- 7. Weidenhofer, J., Scott, R.J. and Tooney, P.A. 2009. Investigation of the expression of genes affecting cytomatrix active zone function in the amygdala in schizophrenia: Effects of antipsychotic drugs. J. Psychiatr. Res. 43: 282-290.

CHROMOSOMAL LOCATION

Genetic locus: RIMS3 (human) mapping to 1p34.2; Rims3 (mouse) mapping to 4 D2.2.

SOURCE

Rim3 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Rim3 of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-131775 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rim3 (S-13) is recommended for detection of Rim3 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 family members Rim1, Rim2 or Rim4.

Suitable for use as control antibody for Rim3 siRNA (h): sc-88820, Rim3 siRNA (m): sc-152966, Rim3 shRNA Plasmid (h): sc-88820-SH, Rim3 shRNA Plasmid (m): sc-152966-SH, Rim3 shRNA (h) Lentiviral Particles: sc-88820-V and Rim3 shRNA (m) Lentiviral Particles: sc-152966-V.

Molecular Weight of Rim3: 33 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat lgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat lgG-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 lgG-FITC: sc-2024 (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.

PROTOCOLS

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

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