SANTA CRUZ BIOTECHNOLOGY, INC.

Rim3 siRNA (h): sc-88820

BACKGROUND

Rab 3, a neural/neuroendocrine-specific member of the Rab family, is involved in Ca^{2+}-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 sub-sequent 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

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3. Haynes, L.P., Evans, G.J., Morgan, A. and Burgoyne, R.D. 2001. A direct inhibitory role for the Rab3-specific effector, Noc2, in Ca^{2+}-regulated exocytosis in neuroendocrine cells. J. Biol. Chem. 27: 9726-9732.
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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.
6. 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.
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CHROMOSOMAL LOCATION

Genetic locus: RIMS3 (human) mapping to 1p34.2.

RESEARCH USE

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

PROTOCOLS

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

PRODUCT

Rim3 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Rim3 shRNA Plasmid (h): sc-88820-SH and Rim3 shRNA (h) Lentiviral Particles: sc-88820-V as alternate gene silencing products.

For independent verification of Rim3 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-88820A, sc-88820B and sc-88820C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Rim3 siRNA (h) is recommended for the inhibition of Rim3 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Rim3 gene expression knockdown using RT-PCR Primer: Rim3 (h)-PR: sc-88820-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.