SANTA CRUZ BIOTECHNOLOGY, INC.

GMIP siRNA (h): sc-97341

BACKGROUND

The Rho family of GTP-binding proteins plays a role in the development of neuronal structure. The activation of the GTP-bound form is regulated by GTPase-activating proteins, which stimulate GTP hydrolysis, leading to inactivation. GMIP (Gem-interacting protein) is a 970 amino acid protein that stimulates the GTPase activity of RhoA *in vitro* and *in vivo*. GMIP interacts with Gem through its N-terminus and has a Rho GTPase-activating protein domain at its C-terminus. GMIP is able to inhibit RhoA function, leading to Actin cytoskeletal reorganization *in vivo*. Encoded by a gene that maps to human chromosome 19p13.11, GMIP contains one phorbol-ester/DAG-type zinc finger and one Rho-GAP domain.

REFERENCES

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7. Hatzoglou, A., Ader, I., Splingard, A., Flanders, J., Saade, E., Leroy, I., Traver, S., Aresta, S. and de Gunzburg, J. 2007. Gem associates with Ezrin and acts via the Rho-GAP protein Gmip to down-regulate the Rho pathway. Mol. Biol. Cell 18: 1242-1252.

CHROMOSOMAL LOCATION

Genetic locus: GMIP (human) mapping to 19p13.11.

PRODUCT

GMIP siRNA (h) is a pool of 2 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 GMIP shRNA Plasmid (h): sc-97341-SH and GMIP shRNA (h) Lentiviral Particles: sc-97341-V as alternate gene silencing products.

For independent verification of GMIP (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-97341A and sc-97341B.

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

GMIP siRNA (h) is recommended for the inhibition of GMIP 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 GMIP gene expression knockdown using RT-PCR Primer: GMIP (h)-PR: sc-97341-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.