SANTA CRUZ BIOTECHNOLOGY, INC.

RHOBTB1 siRNA (h): sc-90810

BACKGROUND

The Rho subfamily of Ras-related GTPases controls multiple aspects of cell function, including cytoskeletal rearrangement, nuclear signaling and cell growth. RHOBTB1 (Rho-related BTB domain-containing protein 1) and RHOBTB3 (Rho-related BTB domain-containing protein 3) each contain two BTB (POZ) domains and belong to the RhoBTB subfamily of Rho GTPases. Members of the RhoBTB subfamily are evolutionarily conserved and are characterized by a proline-rich region, a GTPase domain and two tandem BTB repeats. While both RHOBTB1 and RHOBTB3 are expressed ubiquitously, RHOBTB1 is found at high levels in placenta, stomach, testis, kidney and skeletal muscle, whereas RHOBTB3 is found at high levels in neural and cardiac tissues. RHOBTB1 is thought to play a role in GTPase-mediated signaling and may participate in organization of the Actin filament system. Additionally, RHOBTB1 expression is decreased in head and neck carcinomas, suggesting a possible role for RHOBTB1 as a tumor suppressor.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: RHOBTB1 (human) mapping to 10q21.2.

PROTOCOLS

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

PRODUCT

RHOBTB1 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 RHOBTB1 shRNA Plasmid (h): sc-90810-SH and RHOBTB1 shRNA (h) Lentiviral Particles: sc-90810-V as alternate gene silencing products.

For independent verification of RHOBTB1 (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-90810A, sc-90810B and sc-90810C.

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

RHOBTB1 siRNA (h) is recommended for the inhibition of RHOBTB1 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 RHOBTB1 gene expression knockdown using RT-PCR Primer: RHOBTB1 (h)-PR: sc-90810-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.