SANTA CRUZ BIOTECHNOLOGY, INC.

Rho H siRNA (m): sc-152854

BACKGROUND

The Rho subfamily of small GTP-binding proteins mediates many fundamental cellular functions. The commonly studied members (Rho, Rac, and CDC42) regulate actin reorganization and affect diverse cellular responses, including adhesion, cytokinesis, and motility. RhoH, also known as TTF (translocation Three Four), Rho-related GTP-binding protein and ras homolog gene family member H, is unlike most other small G proteins. Most small G proteins are expressed ubiquitously, however, Rho H is expressed only in hemopoietic cells and tissues. Translocations and a high frequency of Rho H mutation have been detected in primary lymphoma cells. Rho H expression has also been observed in activated neutrophils. RhoH is GTPase deficient, remaining in a GTP-bound activated state without cycling. Rho H may be involved in the functional differentiation of T cells and in cytoskeleton organization. The RhoH/TTF (ARHH) gene maps to chromosome 4p13 and encodes a 191-amino acid polypeptide.

REFERENCES

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2. Dallery-Prudhomme, E., et al. 1997. Genomic structure and assignment of the RhoH/TTF small GTPase gene (ARHH) to 4p13 by *in situ* hybridization. Genomics 43: 89-94.
3. Galiegue-Zouitina, S., et al. 1999. Nonrandom fusion of L-plastin(LCP1) and LAZ3(BCL6) genes by t(3;13)(q27;q14) chromosome translocation in two cases of B-cell non-Hodgkin lymphoma. Genes Chromosomes Cancer 26: 97-105.
4. Yousefi, S., et al. 2000. cDNA representational difference analysis of human neutrophils stimulated by GM-CSF. Biochem. Biophys. Res. Commun. 277: 401-409.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 602037. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: Rhoh (mouse) mapping to 5 C3.1.

PRODUCT

Rho H siRNA (m) 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 Rho H shRNA Plasmid (m): sc-152854-SH and Rho H shRNA (m) Lentiviral Particles: sc-152854-V as alternate gene silencing products.

For independent verification of Rho H (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-152854A, sc-152854B and sc-152854C.

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

Rho H siRNA (m) is recommended for the inhibition of Rho H expression in mouse 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 Rho H gene expression knockdown using RT-PCR Primer: Rho H (m)-PR: sc-152854-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.