SANTA CRUZ BIOTECHNOLOGY, INC.

RBAK siRNA (h): sc-76359

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. RABK (RB-associated KRAB zinc finger), also known as ZNF769 (zinc finger protein 769), is a 714 amino acid protein that localizes to the nucleus and contains one KRAB domain and 16 C_2H_2-type zinc fingers. Expressed in liver, heart, kidney, placenta, pancreas, lung and bone, RBAK interacts with AR (androgen receptor) and Rb (retinoblastoma) and is thought to both promote AR-dependent transcription and repress E2F-dependent transcription.

REFERENCES

1. Skapek, S.X., et al. 2000. Cloning and characterization of a novel Krüppel-associated box family transcriptional repressor that interacts with the retinoblastoma gene product, RB. J. Biol. Chem. 275: 7212-7223.
2. Gomes, I., et al. 2002. Novel transcription factors in human CD34 antigen-positive hematopoietic cells. Blood 100: 107-119.
3. Hofman, K., et al. 2003. The retinoblastoma protein-associated transcription repressor RBAK interacts with the androgen receptor and enhances its transcriptional activity. J. Mol. Endocrinol. 31: 583-596.
4. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 608191. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Zhao, Y., et al. 2006. ZNF325, a novel human zinc finger protein with a RBAK-like RB-binding domain, inhibits AP-1- and SRE-mediated transcriptional activity. Biochem. Biophys. Res. Commun. 346: 1191-1199.
6. So, A., et al. 2006. No evidence for coding region mutations in the retinoblastoma-associated Krüppel-associated box protein gene (RBAK) causing familial hyperaldosteronism type II. Clin. Endocrinol. 65: 829-831.

CHROMOSOMAL LOCATION

Genetic locus: RBAK (human) mapping to 7p22.1.

PRODUCT

RBAK 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 RBAK shRNA Plasmid (h): sc-76359-SH and RBAK shRNA (h) Lentiviral Particles: sc-76359-V as alternate gene silencing products.

For independent verification of RBAK (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-76359A, sc-76359B and sc-76359C.

PROTOCOLS

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

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

RBAK siRNA (h) is recommended for the inhibition of RBAK 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 RBAK gene expression knockdown using RT-PCR Primer: RBAK (h)-PR: sc-76359-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.