SANTA CRUZ BIOTECHNOLOGY, INC.

ARHGAP22 siRNA (h): sc-90662

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in down regulation of their active form. ARHGAP22 (Rho GTPase activating protein 22), also known as RHOGAP2, is a 698 amino acid protein that localizes to the cytoplasm, and contains one Rho-GAP domain and one PH domain. ARHGAP22 functions as a GTPase-activating protein for Rac 1 converting it to an inactive GDP-bound state and, through its interaction with ZNF161 (VEZF1), is thought to be useful in transcription regulation. Multiple isoforms of ARHGAP22 exist due to alternative splicing events.

REFERENCES

1. Katoh, M., et al. 2004. Identification and characterization of ARHGAP24 and ARHGAP25 genes in silico. Int. J. Mol. Med. 14: 333-338.
2. Su, Z.J., et al. 2004. A vascular cell-restricted RhoGAP, p73RhoGAP, is a key regulator of angiogenesis. Proc. Natl. Acad. Sci. USA 101: 12212-12217.
3. Lavelin, I., et al. 2005. Characterization of a novel GTPase-activating protein associated with focal adhesions and the actin cytoskeleton. J. Biol. Chem. 280: 7178-7185.
4. Ohta, Y., et al. 2006. FilGAP, a Rho- and ROCK-regulated GAP for Rac binds filamin A to control actin remodelling. Nat. Cell Biol. 8: 803-814.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610585. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP22 (human) mapping to 10q11.22.

PRODUCT

ARHGAP22 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 ARHGAP22 shRNA Plasmid (h): sc-90662-SH and ARHGAP22 shRNA (h) Lentiviral Particles: sc-90662-V as alternate gene silencing products.

For independent verification of ARHGAP22 (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-90662A, sc-90662B and sc-90662C.

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

ARHGAP22 siRNA (h) is recommended for the inhibition of ARHGAP22 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 ARHGAP22 gene expression knockdown using RT-PCR Primer: ARHGAP22 (h)-PR: sc-90662-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.