SANTA CRUZ BIOTECHNOLOGY, INC.

RIN1 siRNA (m): sc-40912

BACKGROUND

Ras is a membrane-associated small G protein that is indirectly coupled to receptor and nonreceptor tyrosine kinases. Ras activation is regulated by the levels of bound GTP and GDP. Several effectors of Ras have been identified, including Raf1, PI 3-kinase and RIN1. RIN1 (Ras interaction/interference) was identified as a Ras-interacting protein in yeast, and it has been shown to bind to the human H-Ras. This RIN1-Ras interaction is enhanced when Ras is bound to GTP. Unlike Raf1, RIN1 is localized primarily to the plasma membrane. RIN1 contains an SH_2 domain and an amino-terminal region similar to consensus SH3 domains. RIN1 binds c-Abl and, like Raf1, interacts with 14-3-3 proteins.

REFERENCES

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2. Shoelson, S.E. 1997. SH_2 and PTB domain interactions in tyrosine kinase signal transduction. Curr. Opin. Chem. Biol. 1: 227-234.
3. Han, L., Wong, D., Dhaka, A., Afar, D., White, M., Xie, W., Herschman, H., Witte, O. and Colicelli, J. 1997. Protein binding and signaling properties of RIN1 suggest a unique effector function. Proc. Natl. Acad. Sci. USA 94: 4954-4959.
4. Afar, D.E., Han, L., McLaughlin, J., Wong, S., Dhaka, A., Parmar, K., Rosenberg, N., Witte, O.N. and Colcelli, J. 1997. Regulation of the oncogenic activity of Bcr-Abl by a tightly bound substrate protein RIN1. Immunity 6: 773-782.
5. Vojtek, A.B. and Der, C.J. 1998. Increasing complexity of the Ras signaling pathway. J. Biol. Chem. 273: 19925-19928.
6. Downward, J. 1998. Ras signalling and apoptosis. Curr. Opin. Genet. Dev. 8: 49-54.

CHROMOSOMAL LOCATION

Genetic locus: Rin1 (mouse) mapping to 19 A.

PRODUCT

RIN1 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 RIN1 shRNA Plasmid (m): sc-40912-SH and RIN1 shRNA (m) Lentiviral Particles: sc-40912-V as alternate gene silencing products.

For independent verification of RIN1 (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-40912A, sc-40912B and sc-40912C.

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

RIN1 siRNA (m) is recommended for the inhibition of RIN1 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 RIN1 gene expression knockdown using RT-PCR Primer: RIN1 (m)-PR: sc-40912-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.