SANTA CRUZ BIOTECHNOLOGY, INC.

RGD1304773 siRNA (r): sc-108098

BACKGROUND

The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made up of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in the ubiquitination pathway of protein degradation. RGD1304773, also known as Cop1, MGC109175 or Rfwd2 (ring finger and WD repeat domain 2), is a 433 amino acid ring finger E3 ubiquitin ligase that is involved in mammalian cell survival, growth and metabolism. Upregulated by Insulin, RGD1304773 is involved in FKHR stability. It is suggested that RGD1304773 may also play a role in the regulation of hepatic glucose metabolism.

REFERENCES

1. Sun, Y. 2003. Targeting E3 ubiquitin ligases for cancer therapy. Cancer Biol. Ther. 2: 623-629.
2. Dornan, D., Bheddah, S., Newton, K., Ince, W., Frantz, G.D., Dowd, P., Koeppen, H., Dixit, V.M. and French, D.M. 2004. COP1, the negative regulator of p53, is overexpressed in breast and ovarian adenocarcinomas. Cancer Res. 64: 7226-7230.
3. Dornan, D., Wertz, I., Shimizu, H., Arnott, D., Frantz, G.D., Dowd, P., O'Rourke, K., Koeppen, H. and Dixit, V.M. 2004. The ubiquitin ligase COP1 is a critical negative regulator of p53. Nature 429: 86-92.
4. Sun, Y. 2006. E3 ubiquitin ligases as cancer targets and biomarkers. Neoplasia 8: 645-654.
5. Kato, S., Ding, J., Pisck, E., Jhala, U.S. and Du, K. 2008. COP1 functions as a FoxO1 ubiquitin E3 ligase to regulate FoxO1-mediated gene expression. J. Biol. Chem. 283: 35464-35473.

CHROMOSOMAL LOCATION

Genetic locus: Cop1 (rat) mapping to 13q22.

PRODUCT

RGD1304773 siRNA (r) 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 RGD1304773 shRNA Plasmid (r): sc-108098-SH and RGD1304773 shRNA (r) Lentiviral Particles: sc-108098-V as alternate gene silencing products.

For independent verification of RGD1304773 (r) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-108098A, sc-108098B and sc-108098C.

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.

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

RGD1304773 siRNA (r) is recommended for the inhibition of RGD1304773 expression in rat 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 RGD1304773 gene expression knockdown using RT-PCR Primer: RGD1304773 (r)-PR: sc-108098-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.