SANTA CRUZ BIOTECHNOLOGY, INC.

Reg IV siRNA (m): sc-61449

BACKGROUND

Reg IV is part of the regenerating gene family within the C-type lectin superfamily. This family is involved in liver, pancreatic, gastric and intestinal cell proliferation and differentiation. Reg IV is a 158-amino acid secretory protein implicated in cell regeneration and/or survival with a definite growth stimulating effect on pancreatic β cells. It is highly expressed in colorectal, gastric, prostate and other types of cancer. Reg IV-positive tumor cells display different phenotypes including mucus-secreting, enterocyte-like, and undifferentiated.

REFERENCES

1. Violette, S., et al. 2002. Reg IV, a new member of the regenerating gene family, is overexpressed in colo-rectal carcinomas. Int. J. Cancer 103: 185-193.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609846. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Zhang, Y.W., et al. 2003. Reg gene family and human diseases. World J. Gastroenterol. 9: 2635-2641.
4. Yonemura, Y., et al. 2003. Reg gene expression is associated with the infiltrating growth of gastric carcinoma. Cancer 98: 1394-1400.
5. Zhang, Y., et al. 2003. Overexpression of Reg IV in colorectal adenoma. Cancer Lett. 200: 69-76.
6. Miyagawa, K., et al. 2004. Overexpression of Reg IV in peritoneal dissemination of gastric cancer. Gan To Kagaku Ryoho 31: 1909-1911.
7. Nata, K., et al. 2004. Molecular cloning, expression and chromosomal localization of a novel human Reg family gene, Reg III. Gene 340: 161-170.
8. Gu, Z., et al. 2005. Reg IV: a promising marker of hormone refractory metastatic prostate cancer. Clin. Cancer Res. 11: 2237-2243.
9. Heiskala, K., et al. 2006. High expression of RELP (Reg IV) in neoplastic goblet cells of appendiceal mucinous cystadenoma and pseudomyxoma peritonei. Virchows Arch. 448: 295-300.

CHROMOSOMAL LOCATION

Genetic locus: Reg4 (mouse) mapping to 3 F2.2.

PRODUCT

Reg IV 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 Reg IV shRNA Plasmid (m): sc-61449-SH and Reg IV shRNA (m) Lentiviral Particles: sc-61449-V as alternate gene silencing products.

For independent verification of Reg IV (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-61449A, sc-61449B and sc-61449C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

Reg IV siRNA (m) is recommended for the inhibition of Reg IV 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 Reg IV gene expression knockdown using RT-PCR Primer: Reg IV (m)-PR: sc-61449-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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