



Reg IV siRNA (h): sc-61448

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 colorectal 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 (human) mapping to 1p12.

PRODUCT

Reg IV 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Reg IV shRNA Plasmid (h): sc-61448-SH and Reg IV shRNA (h) Lentiviral Particles: sc-61448-V as alternate gene silencing products.

For independent verification of Reg IV (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-61448A, sc-61448B and sc-61448C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Reg IV siRNA (h) is recommended for the inhibition of Reg IV 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 μ M in 66 μ l. 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.

GENE EXPRESSION MONITORING

Reg IV (Lc07): sc-80320 is recommended as a control antibody for monitoring of Reg IV gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Reg IV gene expression knockdown using RT-PCR Primer: Reg IV (h)-PR: sc-61448-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Kuniyasu, H., et al. 2009. Reg IV enhances peritoneal metastasis in gastric carcinomas. *Cell Prolif.* 42: 110-121.
2. He, X.J., et al. 2012. REG4 contributes to the invasiveness of pancreatic cancer by upregulating MMP-7 and MMP-9. *Cancer Sci.* 103: 2082-2091.

PROTOCOLS

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