

# Reg III $\alpha$ siRNA (h): sc-61450

## BACKGROUND

The regeneration (REG) family consists of secretory proteins involved in liver, pancreatic, gastric and intestinal cell proliferation or differentiation. Members of the REG family are divided into four subclasses, designated types I, II, III and IV. They have been implicated in the regulation of cell growth, tumorigenesis and the progression of cancer. Specifically, increased expression of Reg III $\alpha$  results in pancreatic inflammation and liver carcinogenesis. Reg III $\alpha$ , also designated pancreatitis-associated protein, localizes to the apical region of pancreatic acinar cells and is similar to the C-type lectin superfamily. The Reg III $\alpha$  protein is mainly expressed in the intestine, with lower expression detected in healthy pancreas. It is also detected in pancreatic juice as a result of pancreatic inflammation.

## REFERENCES

1. Nata, K., et al. 2004. Molecular cloning, expression and chromosomal localization of a novel human REG family gene, REG3. *Gene* 340: 161-170.
2. Lieu, H.T., et al. 2005. HIP/PAP accelerates liver regeneration and protects against acetaminophen injury in mice. *Hepatology* 42: 618-626.
3. Yu, T.T., et al. 2005. Differentially expressed transcripts from phenotypically identified olfactory sensory neurons. *J. Comp. Neurol.* 483: 251-262.
4. Namikawa, K., et al. 2005. Expression of Reg/PAP family members during motor nerve regeneration in rat. *Biochem. Biophys. Res. Commun.* 332: 126-134.
5. Chen, C.Y., et al. 2005. The value of biliary Amylase and hepatocarcinoma-intestine-protein I (HIP/PAP-I) in diagnosing biliary malignancies. *Clin. Biochem.* 38: 520-525.
6. Jamal, A.M., et al. 2005. Morphogenetic plasticity of adult human pancreatic islets of Langerhans. *Cell Death Differ.* 12: 702-712.

## CHROMOSOMAL LOCATION

Genetic locus: REG3A (human) mapping to 2p12.

## PRODUCT

Reg III $\alpha$  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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Reg III $\alpha$  shRNA Plasmid (h): sc-61450-SH and Reg III $\alpha$  shRNA (h) Lentiviral Particles: sc-61450-V as alternate gene silencing products.

For independent verification of Reg III $\alpha$  (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-61450A, sc-61450B and sc-61450C.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Reg III $\alpha$  siRNA (h) is recommended for the inhibition of Reg III $\alpha$  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  $\mu$ M in 66  $\mu$ 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 III $\alpha$ / $\beta$  (B-10): sc-377038 is recommended as a control antibody for monitoring of Reg III $\alpha$  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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Reg III $\alpha$  gene expression knockdown using RT-PCR Primer: Reg III $\alpha$  (h)-PR: sc-61450-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.