Reg III α/γ (S-13): sc-103862



The Power to Question

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, all of which share a common gene structure containing five introns and six exons. Members of the Reg family have been implicated in the regulation of cell growth, tumorigenesis and the progression of cancer. Reg III γ (regenerating islet-derived 3 γ), also known as pancreatitis-associated protein 1B, PAP1B or UNQ429, is a 175 amino acid secreted protein that is expressed almost exclusively in pancreas, with low levels of expression in testis. Reg III γ functions as an antimicrobial protein involved in controlling bacterial proliferation and may be induced during acute pancreatitis. The gene encoding Reg III γ maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome.

REFERENCES

- Narushima, Y., Unno, M., Nakagawara, K., Mori, M., Miyashita, H., Suzuki, Y., Noguchi, N., Takasawa, S., Kumagai, T., Yonekura, H. and Okamoto, H. 1997. Structure, chromosomal localization and expression of mouse genes encoding type III Reg, Reg IIIα, Reg IIIβ, Reg IIIβ. Gene 185: 159-168.
- Zhang, Y.W., Ding, L.S. and Lai, M.D. 2003. Reg gene family and human diseases. World J. Gastroenterol. 9: 2635-2641.
- Nata, K., Liu, Y., Xu, L., Ikeda, T., Akiyama, T., Noguchi, N., Kawaguchi, S., Yamauchi, A., Takahashi, I., Shervani, N.J., Onogawa, T., Takasawa, S. and Okamoto, H. 2004. Molecular cloning, expression and chromosomal localization of a novel human REG family gene, REG III. Gene 340: 161-170.
- Laurine, E., Manival, X., Montgelard, C., Bideau, C., Bergé-Lefranc, J.L., Erard, M. and Verdier, J.M. 2005. PAP IB, a new member of the Reg gene family: cloning, expression, structural properties, and evolution by gene duplication. Biochim. Biophys. Acta 1727: 177-187.
- Cash, H.L., Whitham, C.V., Behrendt, C.L. and Hooper, L.V. 2006. Symbiotic bacteria direct expression of an intestinal bactericidal lectin. Science 313: 1126-1130.
- Taylor-Fishwick, D.A., Bowman, A., Korngiebel-Rosique, M. and Vinik, A.I. 2008. Pancreatic islet immunoreactivity to the Reg protein INGAP. J. Histochem. Cytochem. 56: 183-191.

CHROMOSOMAL LOCATION

Genetic locus: REG3A/REG3G (human) mapping to 2p12.

SOURCE

Reg III α/γ (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Reg III γ of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103862 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Reg Ill α/γ (S-13) is recommended for detection of Reg Ill α and Reg Ill γ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Reg III α : 19 kDa.

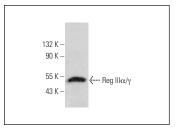
Molecular Weight of Reg Illγ: 16 kDa.

Positive Controls: human pancreas extract: sc-363770.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Reg III α/γ (S-13): sc-103862. Western blot analysis of Reg III α/γ expression in human pancreas tissue extract.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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



Try **Reg III** α / γ (B-10): sc-377038, our highly recommended monoclonal alternative to Reg III α / γ (S-13).

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com