SANTA CRUZ BIOTECHNOLOGY, INC.

GPR120 (N-14): sc-48203

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GPR120, a member of the rhodopsin family of G protein-coupled receptors (GPCRs), is a 377 amino acid protein which is expressed in the intestine. GPR120 is a receptor for unsaturated long-chain FFAs (free fatty acids). FFAs act as signaling molecules and are an important energy source. They also employ various physiological responses through their GPCRs. One such response occurs when dietary FFAs stimulate GPR120. This stimulation promotes the secretion of Glucagon-like peptide-1 (GLP-1) *in vivo* and *in vitro*. GLP-1 belongs to the class of molecules known as the incretins, which are associated with Insulin secreted from the pancreas as a result of food intake. GLP-1 also inhibits glucagon and gastric acid secretion and gastric emptying. Consequently, the role of GPR120 in the secretion of GLP-1 is critical in the treatment of diabetes.

REFERENCES

1. Ferrannini, E., et al. 1983. Effect of fatty acids on glucose production and utilization in man. J. Clin. Invest. 72: 1737-1747.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609044. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Fredriksson, R., et al. 2003. Seven evolutionarily conserved human rhodopsin G protein-coupled receptors lacking close relatives. FEBS Lett. 554: 381-388.
4. González, N., et al. 2005. Effect of GLP-1 on glucose transport and its cell signalling in human myocytes. Regul. Pept. 126: 203-211.
5. Hirasawa, A., et al. 2005. Free fatty acids regulate gut incretin Glucagon-like peptide-1 secretion through GPR120. Nat. Med. 11: 90-94.
6. Katsuma, S., et al. 2005. Free fatty acids inhibit serum deprivation-induced apoptosis through GPR120 in a murine enteroendocrine cell line STC-1. J. Biol. Chem. 280: 19507-19515.

CHROMOSOMAL LOCATION

Genetic locus: FFAR4 (human) mapping to 10q23.33; Ffar4 (mouse) mapping to 19 C2.

SOURCE

GPR120 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GPR120 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-48201 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

GPR120 (N-14) is recommended for detection of GPR120 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

GPR120 (N-14) is also recommended for detection of GPR120 in additional species, including canine and bovine.

Suitable for use as control antibody for GPR120 siRNA (h): sc-60737, GPR120 siRNA (m): sc-60738, GPR120 shRNA Plasmid (h): sc-60737-SH, GPR120 shRNA Plasmid (m): sc-60738-SH, GPR120 shRNA (h) Lentiviral Particles: sc-60737-V and GPR120 shRNA (m) Lentiviral Particles: sc-60738-V.

Molecular Weight (predicted) of GPR120: 42 kDa.

Molecular Weight (observed) of GPR120: 52 kDa.

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) 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.

RESEARCH USE

1. Soto-Guzman, A., et al. 2008. Oleic acid induces ERK1/2 activation and AP-1 DNA binding activity through a mechanism involving Src kinase and EGFR transactivation in breast cancer cells. Mol. Cell. Endocrinol. 294: 81-91.
2. Navarro-Tito, N., et al. 2008. Arachidonic acid promotes FAK activation and migration in MDA-MB-231 breast cancer cells. Exp. Cell Res. 314: 3340-3355.
3. Oliveira, V., et al. 2015. Diets containing α-Linolenic (ω3) or Oleic (ω9) fatty acids rescues obese mice from Insulin resistance. Endocrinology 156: 4033-4046.

RESEARCH USE

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