

# GPR120 (H-155): sc-99105

## 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: GPR120 (human) mapping to 10q23.33; Gpr120 (mouse) mapping to 19 C2.

## SOURCE

GPR120 (H-155) is a rabbit polyclonal antibody raised against amino acids 78-232 mapping at the C-terminus 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.

## 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.

## APPLICATIONS

GPR120 (H-155) is recommended for detection of GPR120 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

GPR120 (H-155) is also recommended for detection of GPR120 in additional species, including canine, bovine and porcine.

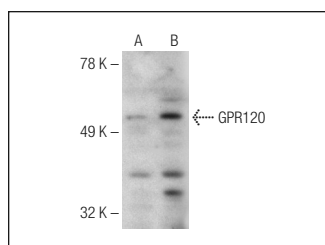
Suitable for use as control antibody for GPR120 siRNA (h): sc-60737, GPR120 siRNA (m): sc-60738, GPR120 shRNA Plasmid (h): sc-60737-SH, GPR120 shRNA Plasmid (m): sc-60738-SH, GPR120 shRNA (h) Lentiviral Particles: sc-60737-V and GPR120 shRNA (m) Lentiviral Particles: sc-60738-V.

Molecular Weight (predicted) of GPR120: 42 kDa.

Molecular Weight (observed) of GPR120: 52 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or DU 145 cell lysate: sc-2268.

## DATA



GPR120 (H-155): sc-99105. Western blot analysis of GPR120 expression in HeLa (A) and DU 145 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Cintra, D.E., et al. 2012. Unsaturated fatty acids revert diet-induced hypothalamic inflammation in obesity. *PLoS ONE* 7: e30571.
2. Oliveira, V., et al. 2015. Diets containing  $\alpha$ -Linolenic ( $\omega$ 3) or Oleic ( $\omega$ 9) fatty acids rescues obese mice from Insulin resistance. *Endocrinology* 156: 4033-4046.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **GPR120 (H-10): sc-390752**, our highly recommended monoclonal alternative to GPR120 (H-155).