SANTA CRUZ BIOTECHNOLOGY, INC.

GPR120 (H-10): sc-390752

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.

CHROMOSOMAL LOCATION

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

SOURCE

GPR120 (H-10) is a mouse monoclonal antibody raised against amino acids 78-232 mapping at the C-terminus of GPR120 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GPR120 (H-10) is available conjugated to agarose (sc-390752 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390752 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390752 PE), fluorescein (sc-390752 FITC), Alexa Fluor® 488 (sc-390752 AF488), Alexa Fluor® 546 (sc-390752 AF546), Alexa Fluor® 594 (sc-390752 AF594) or Alexa Fluor® 647 (sc-390752 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390752 AF680) or Alexa Fluor® 790 (sc-390752 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GPR120 (H-10) is recommended for detection of GPR120 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

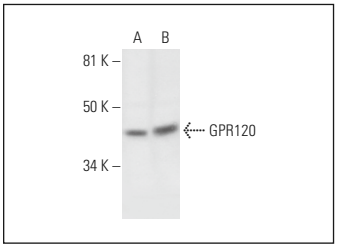
Molecular Weight (observed) of GPR120: 52 kDa.

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

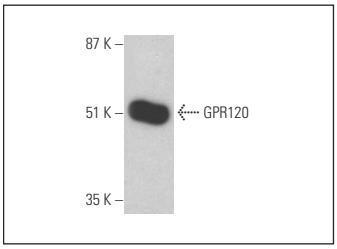
STORAGE

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

DATA



GPR120 (H-10): sc-390752. Western blot analysis of GPR120 expression in HeLa (**A**) and Du 145 (**B**) whole cell lysates.



GPR120 (H-10) HRP: sc-390752 HRP. Direct western blot analysis of GPR120 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Zhang, X.J., et al. 2018. An ALOX12-12-HETE-GPR31 signaling axis is a key mediator of hepatic ischemia-reperfusion injury. Nat. Med. 24: 73-83.
2. Quesada-López, T., et al. 2019. GPR120 controls neonatal brown adipose tissue thermogenic induction. Am. J. Physiol. Endocrinol. Metab. 317: E742-E750.
3. Zhang, W., et al. 2020. Spatiotemporal dynamic monitoring of fatty acid-receptor interaction on single living cells by multiplexed Raman imaging. Proc. Natl. Acad. Sci. USA 117: 3518-3527.
4. Xu, A., et al. 2020. Linoleic acid promotes testosterone production by activating Leydig cell GPR120/ ERK pathway and restores BPA-impaired testicular toxicity. Steroids 163: 108677.
5. Liu, R., et al. 2020. GPR120 agonist GW9508 ameliorated cellular senescence induced by ox-LDL. ACS Omega 5: 32195-32202.
6. Fan, G., et al. 2021. DHA/AA alleviates LPS-induced Kupffer cells pyroptosis via GPR120 interaction with NLRP3 to inhibit inflammasome complexes assembly. Cell Death Dis. 12: 73.
7. Piatek, P., et al. 2022. Natural fish oil improves the differentiation and maturation of oligodendrocyte precursor cells to oligodendrocytes *in vitro* after interaction with the blood-brain barrier. Front. Immunol. 13: 932383.
8. Chen, X., et al. 2022. Stearic acid induces CCK and GLP-1 upregulation via GPR120/PLC-β, leading to reduced appetite in Hu sheep fed with rice straw. Front. Vet. Sci. 9: 948074.
9. Yan, C.H., et al. 2022. AMPKα2 controls the anti-atherosclerotic effects of fish oils by modulating the SUMOylation of GPR120. Nat. Commun. 13: 7721.

RESEARCH USE

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