SANTA CRUZ BIOTECHNOLOGY, INC.

GLP-1 (F-15): sc-26637

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glucagon is a pancreatic hormone that functions as an antagonist to Insulin, stimulating the conversion of glycogen to glucose and increasing blood sugar levels. Glucagon-like peptide-1 (GLP-1), Glucagon-like peptide-2 (GLP-2), VIP (vasoactive intestinal peptide) and PACAP (pituitary adenylate cyclase activating polypeptide) are members of the glucagon family of hormones. GLP-1 functions as a transmitter in the central nervous system, inhibiting feeding and drinking behavior, whereas GLP-2 is a stimulator of intestinal epithelial growth. VIP causes vasodilation resulting in the lowering of blood pressure. PACAP is abundant in the hypothalamus and has been shown to increase the synthesis of several hormones, including growth hormone.

REFERENCES

1. Rouille, Y., Martin, S. and Steiner, D.F. 1995. Differential processing of proglucagon by the subtilisin-like prohormone convertases PC2 and PC3 to generate either Glucagon or Glucagon-like peptide. J. Biol. Chem. 270: 26488-26496.
2. Moens, K., Heimberg, H., Flamez, D., Huypens, P., Quartier, E., Ling, Z., Pipeleers, D., Gremlich, S., Thorens, B. and Schuit, F. 1996. Expression and functional activity of Glucagon, Glucagon-like peptide-1, and glucose-dependent Insulinotropic peptide receptors in rat pancreatic islet cells. Diabetes 45: 257-261.
3. Scrocchi, L.A., Brown, T.J., MaClusky, N., Brubaker, P.L., Auerbach, A.B., Joyner, A.L. and Drucker, D.J. 1996. Glucose intolerance but normal satiety in mice with a null mutation in the Glucagon-like peptide-1 receptor gene. Nat. Med. 2: 1254-1258.
4. Jiang, S., Kopras, E., McMichael, M., Bell, R.H., Jr. and Ulrich, C.D., 2nd. 1997. Vasoactive intestinal peptide (VIP) stimulates *in vitro* growth of VIP-1 receptor-bearing human pancreatic adenocarcinoma-derived cells. Cancer Res. 57: 1475-1480.
5. Bollen, M., Keppens, S. and Stalmans, W. 1998. Specific features of glycogen metabolism in the liver. Biochem. J. 336: 19-31.
6. Martínez-Fuentes, A.J., Castaño, J.P., Gracia-Navarro, F. and Malagón, M.M. 1998. Pituitary adenylate cyclase-activating polypeptide (PACAP) 38 and PACAP27 activate common and distinct intracellular signaling pathways to stimulate growth hormone secretion from porcine somatotropes. Endocrinology 139: 5116-5124.

CHROMOSOMAL LOCATION

Genetic locus: GCG (human) mapping to 2q24.2; Gcg (mouse) mapping to 2 C1.3.

SOURCE

GLP-1 (F-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GLP-1 of human origin.

STORAGE

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

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-26637 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GLP-1 (F-15) is recommended for detection of precursor and processed active GLP-1 of mouse, rat and human origin by 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); non cross-reactive with glucagon.

GLP-1 (F-15) is also recommended for detection of precursor and processed active GLP-1 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of GLP-1: 4 kDa.

Molecular Weight of GLP-1 precursor: 19 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) 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.

SELECT PRODUCT CITATIONS

1. Rozengurt, N., Wu, S.V., Chen, M.C., Huang, C., Sternini, C. and Rozengurt, E. 2006. Co-localization of the α-subunit of gustducin with PYY and GLP-1 in L cells of human colon. Am. J. Physiol. Gastrointest. Liver Physiol. 291: G792-G802.
2. Felix, K., Fakelman, F., Hartmann, D., Giese, N.A., Gaida, M.M., Schnölzer, M., Flad, T., Büchler, M.W. and Werner, J. 2011. Identification of serum proteins involved in pancreatic cancer cachexia. Life Sci. 88: 218-225.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.