

Glucagon (79/bB10): sc-130624

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

- Rouille, Y., et al. 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.
- Moens, K., et al. 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.
- Scrocchi, L.A., et al. 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.
- Jiang, S., et al. 1997. Vasoactive intestinal peptide (VIP) stimulates *in vitro* growth of VIP1 receptor-bearing human pancreatic adenocarcinoma-derived cells. *Cancer Res.* 57: 1475-1480.
- Bollen, M., et al. 1998. Specific features of glycogen metabolism in the liver. *Biochem. J.* 336: 19-31.
- Martinez-Fuentes, A.J., et al. 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.
- Franklin, I., et al. 2005. β -cell secretory products activate α -cell ATP-dependent potassium channels to inhibit Glucagon release. *Diabetes* 54: 1808-1815.

CHROMOSOMAL LOCATION

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

SOURCE

Glucagon (79/bB10) is a mouse monoclonal antibody raised against polymerized Glucagon of porcine origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Glucagon (79/bB10) is recommended for detection of Glucagon of mouse, rat, human, porcine, feline and canine 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); not recommended for detection of enteroglucagon.

Suitable for use as control antibody for Proglucagon siRNA (h): sc-39528, Proglucagon siRNA (m): sc-39529, Proglucagon shRNA Plasmid (h): sc-39528-SH, Proglucagon shRNA Plasmid (m): sc-39529-SH, Proglucagon shRNA (h) Lentiviral Particles: sc-39528-V and Proglucagon shRNA (m) Lentiviral Particles: sc-39529-V.

Molecular Weight of Proglucagon: 19 kDa.

Molecular Weight of Glucagon: 3 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

- Weng, Z., et al. 1994. Identification of Src, Fyn, and Lyn SH3-binding proteins: implications for a function of SH3 domains. *Mol. Cell. Biol.* 14: 4509-4521.
- Obata, A., et al. 2019. Vascular endothelial PDK1 plays a pivotal role in the maintenance of pancreatic β cell mass and function in adult male mice. *Diabetologia* 62: 1225-1236.
- Zhang, J., et al. 2020. Extracellular HMGB1 exacerbates autoimmune progression and recurrence of type 1 diabetes by impairing regulatory T cell stability. *Diabetologia*. E-published.

STORAGE

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

PROTOCOLS

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



See **Glucagon (C-11): sc-514592** for Glucagon antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.