SANTA CRUZ BIOTECHNOLOGY, INC.

Glucagon (K79bB10): sc-57171

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., 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.
2. 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.
3. 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.
4. Jiang, S., et al. 1997. Vasoactive intestinal peptide (VIP) stimulates *in vitro* growth of VIP-1 receptor-bearing human pancreatic adenocarcinoma-derived cells. Cancer Res. 57: 1475-1480.

CHROMOSOMAL LOCATION

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

SOURCE

Glucagon (K79bB10) is a mouse monoclonal antibody raised against polymerized Glucagon of porcine origin.

PRODUCT

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

Glucagon (K79bB10) is available conjugated to agarose (sc-57171 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-57171 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-57171 PE), fluorescein (sc-57171 FITC), Alexa Fluor® 488 (sc-57171 AF488), Alexa Fluor® 546 (sc-57171 AF546), Alexa Fluor® 594 (sc-57171 AF594) or Alexa Fluor® 647 (sc-57171 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-57171 AF680) or Alexa Fluor® 790 (sc-57171 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

Glucagon (K79bB10) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); not recommended for detection of enteroglucagon.

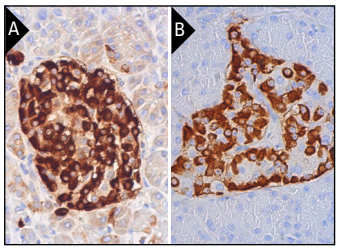
Suitable for use as control antibody for Proglucagon siRNA (h): sc-39528, Proglucagon siRNA (m): sc-39529, Proglucagon shRNA Plasmid (h): sc-39528-SH, Proglucagon shRNA Plasmid (m): sc-39529-SH, Proglucagon shRNA (h) Lentiviral Particles: sc-39528-V and Proglucagon shRNA (m) Lentiviral Particles: sc-39529-V.

Molecular Weight of Glucagon: 3 kDa.

Molecular Weight of Proglucagon: 19 kDa.

Positive Controls: mouse pancreas extract: sc-364244.

DATA



Glucagon (K79bB10): sc-57171. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans cells (**A**,**B**).

SELECT PRODUCT CITATIONS

1. Xiao, Y., et al. 2018. Deficiency of PRKD2 triggers hyperinsulinemia and metabolic disorders. Nat. Commun. 9: 2015.
2. Okano, S., et al. 2019. Karyopherin α 2-expressing pancreatic duct glands and intra-islet ducts in aged diabetic C414A-mutant-CRY1 transgenic mice. J. Diabetes Res. 2019: 7234549.
3. Fitzgerald, R., et al. 2020. Pancreatic islets accumulate cadmium in a rodent model of cadmium-induced hyperglycemia. Int. J. Mol. Sci. 22: 360.

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.