

# Glucagon (C-18): sc-7779

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Glucagon (C-18) is available as either goat (sc-7779) or rabbit (sc-7779-R) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of Glucagon of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7779 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Glucagon (C-18) is recommended for detection of Glucagon and Proglucagon 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), immunohistochemistry (including paraffin-embedded sections) (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 GLP-1 or GLP-2

Glucagon (C-18) is also recommended for detection of Glucagon and Proglucagon in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Proglucagon: 19 kDa.

Molecular Weight of Glucagon: 3 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

## RESEARCH USE

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

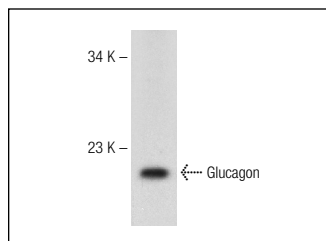
## PROTOCOLS

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

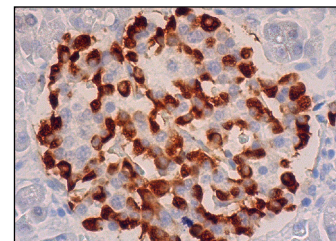
## STORAGE

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

## DATA



Glucagon (C-18)-R: sc-7779-R. Western blot analysis of Glucagon expression in NIH/3T3 whole cell lysate.



Glucagon (C-18): sc-7779. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans cells.

## SELECT PRODUCT CITATIONS

1. Araujo, E.P., et al. 2002. Blockade of IRS1 in isolated rat pancreatic islets improves glucose-induced Insulin secretion. *FEBS Lett.* 531: 437-442.
2. Tayaramma, T., et al. 2006. Chromatin-remodeling factors allow differentiation of bone marrow cells into Insulin-producing cells. *Stem Cells* 24: 2858-2867.
3. Kiss, J., et al. 2006. Glutamatergic innervation of growth hormone-releasing hormone-containing neurons in the hypothalamic arcuate nucleus and somatostatin-containing neurons in the anterior periventricular nucleus of the rat. *Brain Res. Bull.* 70: 278-288.
4. Takeshita, F., et al. 2006. Streptozotocin-induced partial  $\beta$  cell depletion in nude mice without hyperglycaemia induces pancreatic morphogenesis in transplanted embryonic stem cells. *Diabetologia* 49: 2948-2958.
5. Kodama, M., et al. 2008. Pancreatic endocrine and exocrine cell ontogeny from renal capsule transplanted embryonic stem cells in streptozotocin-injured mice. *J. Histochem. Cytochem.* 56: 33-44.
6. Nostro, M.C., et al. 2011. Stage-specific signaling through TGF $\beta$  family members and WNT regulates patterning and pancreatic specification of human pluripotent stem cells. *Development* 138: 861-871.
7. Wei, L., et al. 2011. Induction of diabetes with signs of autoimmunity in primates by the injection of multiple-low-dose streptozotocin. *Biochem. Biophys. Res. Commun.* 412: 373-378.
8. Marroquí, L., et al. 2012. Functional and structural adaptations in the pancreatic  $\alpha$ -cell and changes in glucagon signaling during protein malnutrition. *Endocrinology* 153: 1663-1672.



Try **Glucagon (C-11): sc-514592** or **Glucagon (K79bB10): sc-51711**, our highly recommended monoclonal alternatives to Glucagon (C-18). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Glucagon (C-11): sc-514592**.