

Glucagon (N-17): sc-7780

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 I, and glucose-dependent Insulinotropic peptide receptors in rat pancreatic islet cells. *Diabetes* 45: 257-261.

CHROMOSOMAL LOCATION

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

SOURCE

Glucagon (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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-7780 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Glucagon (N-17) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with GLP-1 or GLP-2.

Glucagon (N-17) 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.

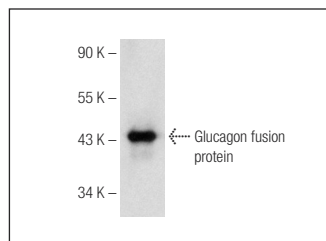
RESEARCH USE

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

STORAGE

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

DATA



Glucagon (N-17): sc-7780. Western blot analysis of human recombinant Glucagon fusion protein.

SELECT PRODUCT CITATIONS

1. Liu, A., et al. 2004. Identification of PCIF1, a POZ domain protein that inhibits PDX-1 (MODY4) transcriptional activity. *Mol. Cell. Biol.* 24: 4372-4383.
2. Vigliotta, G., et al. 2004. Overexpression of the ped/pea-15 gene causes diabetes by impairing glucose-stimulated insulin secretion in addition to insulin action. *Mol. Cell. Biol.* 24: 5005-5015.
3. Kataoka, K., et al. 2004. Differentially expressed Maf family transcription factors, c-Maf and MafA, activate glucagon and Insulin gene expression in pancreatic islet α - and β -cells. *J. Mol. Endocrinol.* 32: 9-20.
4. Kroon, E., et al. 2008. Pancreatic endoderm derived from human embryonic stem cells generates glucose-responsive Insulin-secreting cells *in vivo*. *Nat. Biotechnol.* 26: 443-452.
5. Ye, D.Z., et al. 2009. Foxa1 and Foxa2 control the differentiation of goblet and enteroendocrine L- and D-cells in mice. *Gastroenterology* 137: 2052-2062.
6. Karaoz, E. 2009. Pancreatic islet-derived stem cells may have a key role in type 1 diabetes pathogenesis. *Cell Tissue Biol. Res.* 2: 8-22.
7. Karaoz, E., et al. 2010. Isolation and characterization of stem cells from pancreatic islet: pluripotency, differentiation potential and ultrastructural characteristics. *Cytotherapy* 12: 288-302.
8. Karaoz, E., et al. 2010. Pancreatic islet derived stem cells can express co-stimulatory molecules of antigen-presenting cells. *Transplant. Proc.* 42: 3663-3670.



Try **Glucagon (C-11): sc-514592** or **Glucagon (K79bB10): sc-57171**, our highly recommended monoclonal alternatives to Glucagon (N-17). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Glucagon (C-11): sc-514592**.