

# Glucagon Receptor (N-12): sc-34640

## BACKGROUND

Glucagon, a pancreatic hormone, functions as an antagonist to Insulin, stimulating the conversion of glycogen to glucose and increasing blood sugar levels. GLP-1 functions as a transmitter in the central nervous system, inhibiting feeding and drinking behavior. Both glucagon and GLP-1 function through their specific binding to the glucagon receptor or GLP-1R, respectively. The Glucagon Receptor shows expression in liver, kidney and adipose tissue. The GLP-1R expression primarily localizes to areas of the hypothalamus involved in feeding behavior. Both receptors and their ligands serve as potential targets for the therapeutic treatment of diabetes.

## REFERENCES

1. Iwanij, V., et al. 1990. Characterization of the GLP-1R and its functional domains using monoclonal antibodies. *J. Biol. Chem.* 265: 21302-21308.
2. 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.
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. Bollen, M., et al. 1998. Specific features of glycogen metabolism in the liver. *Biochem. J.* 336: 19-31.
5. Jiang, G., et al. 2003. Glucagon and regulation of glucose metabolism. *Am. J. Physiol. Endocrinol. Metab.* 284: E671-E678.
6. Gromada, J., et al. 2004. Glucagon-like peptide-1: regulation of Insulin secretion and therapeutic potential. *Basic Clin. Pharmacol. Toxicol.* 95: 252-262.
7. Qureshi, S.A., et al. 2004. A novel glucagon receptor antagonist inhibits glucagon-mediated biological effects. *Diabetes* 53: 3267-3273.
8. Alvarez, E., et al. 2005. The expression of GLP-1 receptor mRNA and protein allows the effect of GLP-1 on glucose metabolism in the human hypothalamus and brainstem. *J. Neurochem.* 92: 798-806.

## CHROMOSOMAL LOCATION

Genetic locus: GCGR (human) mapping to 17; Gcgr (mouse) mapping to 11 E2.

## SOURCE

Glucagon Receptor (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of Glucagon Receptor 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.

## PROTOCOLS

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

## 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-34640 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Glucagon Receptor (N-12) is recommended for detection of Glucagon Receptor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Glucagon Receptor (N-12) is also recommended for detection of Glucagon Receptor in additional species, including equine and bovine.

Suitable for use as control antibody for Glucagon Receptor siRNA (h): sc-45765, Glucagon Receptor siRNA (m): sc-45766, Glucagon Receptor shRNA Plasmid (h): sc-45765-SH, Glucagon Receptor shRNA Plasmid (m): sc-45766-SH, Glucagon Receptor shRNA (h) Lentiviral Particles: sc-45765-V and Glucagon Receptor shRNA (m) Lentiviral Particles: sc-45766-V.

Molecular Weight of Glucagon Receptor: 62 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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.

## RESEARCH USE

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