

# GLP-1R (Y-12): sc-34637

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: GLP1R (human) mapping to 6p21.2; Glp1r (mouse) mapping to 17 A3.3.

## SOURCE

GLP-1R (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of GLP-1R 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-34637 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

GLP-1R (Y-12) is recommended for detection of GLP-1R 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).

GLP-1R (Y-12) is also recommended for detection of GLP-1R in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for GLP-1R siRNA (h): sc-45760, GLP-1R siRNA (m): sc-45764, GLP-1R shRNA Plasmid (h): sc-45760-SH, GLP-1R shRNA Plasmid (m): sc-45764-SH, GLP-1R shRNA (h) Lentiviral Particles: sc-45760-V and GLP-1R shRNA (m) Lentiviral Particles: sc-45764-V.

Molecular Weight of GLP-1R: 56 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.

## SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2009. Protection of exendin-4 analogue in early experimental diabetic retinopathy. *Graefes Arch. Clin. Exp. Ophthalmol.* 247: 699-706.
2. Ren, Z., et al. 2010. Oestrogen regulates proliferation and differentiation of human islet-derived precursor cells through oestrogen receptor  $\alpha$ . *Cell Biol. Int.* 34: 523-530.
3. Zhang, Y., et al. 2011. Intravitreal injection of exendin-4 analogue protects retinal cells in early diabetic rats. *Invest. Ophthalmol. Vis. Sci.* 52: 278-285.
4. Barakat, G.M., et al. 2012. Effects of selenium and exendin-4 on glucagon-like peptide-1 receptor, IRS-1, and Raf-1 in the liver of diabetic rats. *Biochem. Genet.* 50: 922-935.

## RESEARCH USE

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



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Try **GLP-1R (D-6): sc-390774** or **GLP-1R (B-11): sc-390773**, our highly recommended monoclonal alternatives to GLP-1R (Y-12).