

GIPR (H-70): sc-98795

BACKGROUND

GIPR (gastric inhibitory polypeptide receptor) is a 466 amino acid protein belonging to the G protein-coupled receptor 2 family. The activity of GIPR is mediated by G proteins, which activate adenylyl cyclase. Expressed as two isoforms produced by alternative splicing, GIPR is a multi-pass cell membrane protein that acts as a receptor for the glucose-dependent Insulinotropic polypeptide (GIP). GIP is a major physiologic factor in the augmentation of the Insulin response to oral glucose. GIP is a peptide hormone that is released postprandially from the small intestine and acts in concert with glucagon-like peptide GLP1 to potentiate glucose-induced Insulin secretion from the pancreatic β cell. GIP has been shown to increase adenylyl cyclase activity, elevate intracellular calcium levels, and stimulate a mitogen-activated protein kinase pathway in the pancreatic β cell. GIP release is demonstrated predominantly after ingestion of carbohydrate and fat and the effects of acid on GIP are consistent with a role for GIP as an enterogastrone.

REFERENCES

1. Yamada, Y. and Seino, Y. 2004. Physiology of GIP—a lesson from GIP receptor knockout mice. *Horm. Metab. Res.* 36: 771-774.
2. Boylan, M.O., et al. 2006. Sp1/Sp3 binding is associated with cell-specific expression of the glucose-dependent Insulinotropic polypeptide receptor gene. *Am. J. Physiol. Endocrinol. Metab.* 290: E1287-E1295.
3. Marenah, L., et al. 2006. A stable analogue of glucose-dependent insulinotropic polypeptide, GIP(LysPAL16), enhances functional differentiation of mouse embryonic stem cells into cells expressing islet-specific genes and hormones. *Biol. Chem.* 387: 941-947.
4. Lampron, A., et al. 2006. Whole genome expression profiling of glucose-dependent Insulinotropic peptide (GIP)- and adrenocorticotropin-dependent adrenal hyperplasias reveals novel targets for the study of GIP-dependent Cushing's syndrome. *J. Clin. Endocrinol. Metab.* 91: 3611-3618.
5. Tsukiyama, K., et al. 2006. Gastric inhibitory polypeptide as an endogenous factor promoting new bone formation after food ingestion. *Mol. Endocrinol.* 20: 1644-1651.
6. Irwin, N., et al. 2006. Biological activity and antidiabetic potential of synthetic fragment peptides of glucose-dependent Insulinotropic polypeptide, GIP(1-16) and (Pro3)GIP(1-16). *Regul. Pept.* 135: 45-53.

CHROMOSOMAL LOCATION

Genetic locus: GIPR (human) mapping to 19q13.32; Gipr (mouse) mapping to 7 A3.

SOURCE

GIPR (H-70) is a rabbit polyclonal antibody raised against amino acids 268-337 mapping within an internal region of GIPR of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GIPR (H-70) is recommended for detection of GIPR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

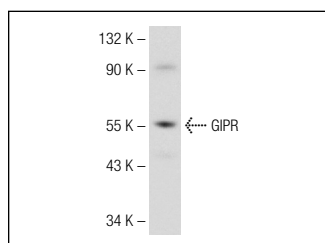
GIPR (H-70) is also recommended for detection of GIPR in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GIPR siRNA (h): sc-75134, GIPR siRNA (m): sc-75135, GIPR shRNA Plasmid (h): sc-75134-SH, GIPR shRNA Plasmid (m): sc-75135-SH, GIPR shRNA (h) Lentiviral Particles: sc-75134-V and GIPR shRNA (m) Lentiviral Particles: sc-75135-V.

Molecular Weight of GIPR: 53 kDa.

Positive Controls: rat pituitary gland extract: sc-364807.

DATA



GIPR (H-70): sc-98795. Western blot analysis of GIPR expression in rat pituitary tissue extract.

SELECT PRODUCT CITATIONS

1. Puddu, A., et al. 2015. Effects of high glucose levels and glycated serum on GIP responsiveness in the pancreatic β cell line HIT-T15. *J. Diabetes Res.* 2015: 326359.
2. Berglund, L.M., et al. 2015. Glucose-dependent insulinotropic polypeptide (GIP) stimulates osteopontin expression in the vasculature via endothelin-1 and CREB. *Diabetes*. E-published.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.