

# GIP (Y-20): sc-23554

## BACKGROUND

Glucose-dependent Insulinotropic polypeptide (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 (GLP)-1 to potentiate glucose-induced Insulin secretion from the pancreatic  $\beta$  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  $\beta$  cell. Additionally, nutrient protein provides a potent stimulus for GIP expression, an effect that occurs at the posttranslational level and may be mediated in part through the acid-stimulatory properties of protein. 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.

## CHROMOSOMAL LOCATION

Genetic locus: GIP (human) mapping to 17q21.32; Gip (mouse) mapping to 11 D.

## SOURCE

GIP (Y-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GIP of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-23554 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GIP (Y-20) is recommended for detection of GIP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

GIP (Y-20) is also recommended for detection of GIP in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for GIP siRNA (h): sc-72038, GIP siRNA (m): sc-72039, GIP shRNA Plasmid (h): sc-72038-SH, GIP shRNA Plasmid (m): sc-72039-SH, GIP shRNA (h) Lentiviral Particles: sc-72038-V and GIP shRNA (m) Lentiviral Particles: sc-72039-V.

Molecular Weight of GIP: 5 kDa.

Positive Controls: GIP (h): 293T Lysate: sc-371647.

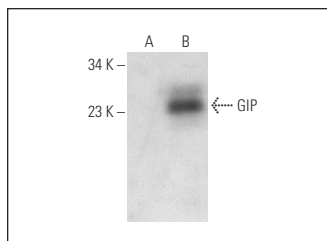
## STORAGE

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

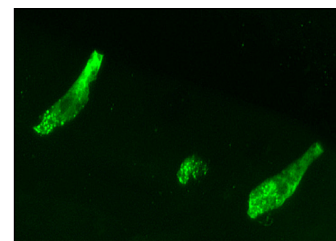
## RESEARCH USE

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

## DATA



GIP (Y-20): sc-23554. Western blot analysis of GIP expression in non-transfected: sc-117752 (A) and human GIP transfected: sc-371647 (B) 293T whole cell lysates.



GIP (Y-20): sc-23554. Immunofluorescence staining of Zamboni-fixed frozen-sectioned human intestine tissue showing cytoplasmic staining. Kindly provided by the Dr. William Kennedy lab, University of Minnesota.

## SELECT PRODUCT CITATIONS

- Gagnon, J., et al. 2009. Expression of PCSK1 (PC1/3), PCSK2 (PC2) and PCSK3 (Furin) in mouse small intestine. *Regul. Pept.* 152: 54-60.
- 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.
- Gniuli, D., et al. 2010. High-fat feeding stimulates endocrine, glucose-dependent Insulinotropic polypeptide (GIP)-expressing cell hyperplasia in the duodenum of Wistar rats. *Diabetologia* 53: 2233-2240.
- Moran, A.W., et al. 2010. Expression of Na<sup>+</sup>/glucose co-transporter 1 (SGLT1) is enhanced by supplementation of the diet of weaning piglets with artificial sweeteners. *Br. J. Nutr.* 104: 637-646.
- Encina, G., et al. 2011. Insulin is secreted upon glucose stimulation by both gastrointestinal enteroendocrine K-cells and L-cells engineered with the preproinsulin gene. *Biol. Res.* 44: 301-305.
- Daly, K., et al. 2013. Sensing of amino acids by the gut-expressed taste receptor T1R1-T1R3 stimulates CCK secretion. *Am. J. Physiol. Gastrointest. Liver Physiol.* 304: G271-G282.
- Li, Y., et al. 2013. Gustducin couples fatty acid receptors to GLP-1 release in colon. *Am. J. Physiol. Endocrinol. Metab.* 304: E651-E660.

## PROTOCOLS

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



Try **GIP (6F107): sc-71149**, our highly recommended monoclonal alternative to GIP (Y-20).