

# Gastrin (B-10): sc-28302

## BACKGROUND

Gastrin, which is normally formed by mucosal cells in the gastric antrum and by the D cells of the pancreatic islets, is a hormone whose main function is to stimulate secretion of HCl by the gastric mucosa. HCl, in turn, inhibits gastrin formation. Gastrin also stimulates smooth muscle contraction and increases blood circulation and water secretion in the stomach and intestine. Gastrin is regulated by epidermal growth factor in both mice and humans. Gastrin is excreted in excess by pancreatic tumors in the Zollinger-Ellison syndrome. Gastrin maps to human chromosome 17q21.2. Gastrin-Releasing Peptide (GRP) stimulates the release of gastrin as well as other gastrointestinal hormones, in addition to acting as an autocrine growth factor for certain cell types. High levels of GRP are found in the human lung just after birth and levels decrease thereafter in parallel with the observed disease in a number of pulmonary neuroendocrine cells. GRP is known to promote lung tumorigenesis in model systems and, interestingly, is induced by retinoic acid. GRP is involved in several functions with the hypothalamus, and is thought to play a role in regulating pituitary hormone secretion. GRP maps to human chromosome 18q21.

## REFERENCES

1. Gregory, R.A., et al. 1969. Amino acid constitution of two Gastrins isolated from Zollinger-Ellison tumor tissue. *Gut* 10: 603-608.
2. Lebacqz-Verheyden, A.M., et al. 1987. Human Gastrin-releasing peptide gene maps to chromosome band 18q21. *Somat. Cell Molec. Genet.* 13: 81-86.
3. Flejter, W.L., et al. 1993. Multicolor FISH mapping with Alu-PCR-amplified YAC clone DNA determines the order of markers in the BRCA1 region on chromosome 17q12-q21. *Genomics* 17: 624-631.
4. Koh, T.J. and Wang, T.C. 1995. Molecular cloning and sequencing of the murine Gastrin gene. *Biochem. Biophys. Res. Commun.* 216: 34-41.

## CHROMOSOMAL LOCATION

Genetic locus: GAST (human) mapping to 17q21.2.

## SOURCE

Gastrin (B-10) is a mouse monoclonal antibody raised against amino acids 1-90 of Gastrin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Gastrin (B-10) is available conjugated to agarose (sc-28302 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28302 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28302 PE), fluorescein (sc-28302 FITC), Alexa Fluor® 488 (sc-28302 AF488), Alexa Fluor® 546 (sc-28302 AF546), Alexa Fluor® 594 (sc-28302 AF594) or Alexa Fluor® 647 (sc-28302 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28302 AF680) or Alexa Fluor® 790 (sc-28302 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Gastrin (B-10) is recommended for detection of Gastrin of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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).

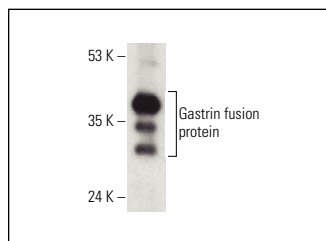
Suitable for use as control antibody for Gastrin siRNA (h): sc-37103, Gastrin shRNA Plasmid (h): sc-37103-SH and Gastrin shRNA (h) Lentiviral Particles: sc-37103-V.

Molecular Weight of Gastrin: 2/4/14 kDa.

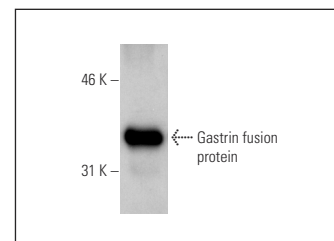
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Gastrin (B-10): sc-28302. Western blot analysis of human recombinant Gastrin fusion protein. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



Gastrin (B-10): sc-28302. Western blot analysis of human recombinant Gastrin fusion protein.

## SELECT PRODUCT CITATIONS

1. Zhou, J.J., et al. 2010. Blocking gastrin and CCK-B autocrine loop affects cell proliferation and apoptosis *in vitro*. *Mol. Cell. Biochem.* 343: 133-141.
2. Hashi, K., et al. 2018. Evaluating the origin and virulence of a *Helicobacter pylori* cagA-positive strain isolated from a non-human primate. *Sci. Rep.* 8: 15981.

## 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.