SANTA CRUZ BIOTECHNOLOGY, INC.

Gastrin (C-20): sc-7783

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: GAST (human) mapping to 17q21.2, CCK (human) mapping to 3p22.1; Gast (mouse) mapping to 11 D, Cck (mouse) mapping to 9 F4.

SOURCE

Gastrin (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Gastrin of human origin.

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-7783 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

Gastrin (C-20) is recommended for detection of Gastrin 71, Gastrin 17, Gastrin 34 and to a lesser extent, Cholecystokinin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

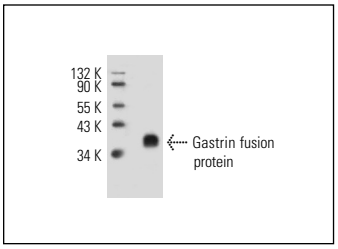
Gastrin (C-20) is also recommended for detection of Gastrin 71, Gastrin 17, Gastrin 34 and to a lesser extent Cholecystokinin in additional species, including canine, bovine, porcine and feline.

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

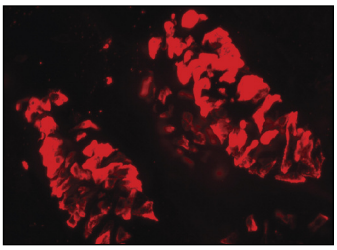
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Gastrin (C-20): sc-7783. Western blot analysis of human recombinant Gastrin fusion protein.



Gastrin (C-20): sc-7783. Immunofluorescence staining of paraformaldehyde-fixed frozen human antrum tissue showing cytoplasmic staining. Kindly provided by Dr. William Kennedy and Brian McAdams, University of Minnesota.

SELECT PRODUCT CITATIONS

1. Arnold, K., et al. 2011. Sox2+ adult stem and progenitor cells are important for tissue regeneration and survival of mice. Cell Stem Cell 9: 317-329.
2. Vanoli, A., et al. 2013. Histologic changes in type A chronic atrophic gastritis indicating increased risk of neuroendocrine tumor development: the predictive role of dysplastic and severely hyperplastic enterochromaffin-like cell lesions. Hum. Pathol. 44: 1827-1837.
3. Bonnavion, R., et al. 2015. Islet cells serve as cells of origin of pancreatic gastrin-positive endocrine tumours. Mol. Cell. Biol. 35: 3274-3283.

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.