SANTA CRUZ BIOTECHNOLOGY, INC.

GRP (FL-148): sc-28923

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 17q12. 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. 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 18q21.31.

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. Lebacq-Verheyden, A.M., et al. 1987. Human Gastrin-releasing peptide gene maps to chromosome band 18q21. Somat. Cell Mol. 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.
5. Sachs, G., et al. 1997. Physiology of isolated gastric endocrine cells. Annu. Rev. Physiol. 59: 243-256.
6. Terashi, H., et al. 1998. Growth stimulation of normal melanocytes and nevocellular nevus cells by Gastrin releasing peptide (GRP). J. Dermatol. Sci. 17: 93-100.
7. Ravi, R.K. 1998. Induction of Gastrin releasing peptide by all-*trans* retinoic acid in small cell lung cancer cells. Oncol. Rep. 5: 497-501.

CHROMOSOMAL LOCATION

Genetic locus: GRP (human) mapping to 18q21.31; Grp (mouse) mapping to 18 E1.

SOURCE

GRP (FL-148) is a rabbit polyclonal antibody raised against amino acids 1-148 representing full length GRP 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.

STORAGE

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

APPLICATIONS

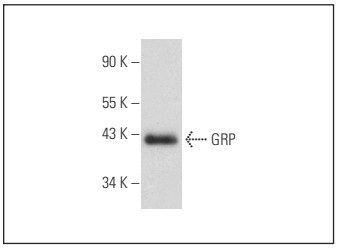
GRP (FL-148) is recommended for detection of GRP and neuromedin C active peptides of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GRP siRNA (h): sc-39499, GRP siRNA (m): sc-39500, GRP shRNA Plasmid (h): sc-39499-SH, GRP shRNA Plasmid (m): sc-39500-SH, GRP shRNA (h) Lentiviral Particles: sc-39499-V and GRP shRNA (m) Lentiviral Particles: sc-39500-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GRP (FL-148): sc-28923. Western blot analysis of full length human recombinant GRP.

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.