

GRP (E-11): sc-271045

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 18q21.32.

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 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.

CHROMOSOMAL LOCATION

Genetic locus: GRP (human) mapping to 18q21.32.

SOURCE

GRP (E-11) is a mouse monoclonal antibody raised against amino acids 1-148 representing full length GRP of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GRP (E-11) is available conjugated to agarose (sc-271045 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271045 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271045 PE), fluorescein (sc-271045 FITC), Alexa Fluor® 488 (sc-271045 AF488), Alexa Fluor® 546 (sc-271045 AF546), Alexa Fluor® 594 (sc-271045 AF594) or Alexa Fluor® 647 (sc-271045 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271045 AF680) or Alexa Fluor® 790 (sc-271045 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GRP (E-11) is recommended for detection of GRP and neuromedin C active peptides of 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).

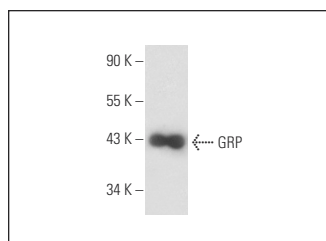
Suitable for use as control antibody for GRP siRNA (h): sc-39499, GRP shRNA Plasmid (h): sc-39499-SH and GRP shRNA (h) Lentiviral Particles: sc-39499-V.

Molecular Weight of GRP: 16 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



GRP (E-11): sc-271045. Western blot analysis of full length human recombinant GRP.

SELECT PRODUCT CITATIONS

1. Solorzano, S.R., et al. 2018. GABA promotes gastrin-releasing peptide secretion in NE/NE-like cells: contribution to prostate cancer progression. *Sci. Rep.* 8: 10272.
2. Okuda, K., et al. 2020. Secretory cells dominate airway CFTR expression and function in human airway superficial epithelia. *Am. J. Respir. Crit. Care Med.* 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.

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