

GRPR (F-6): sc-377316

BACKGROUND

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. The human GRP receptor (GRPR) gene maps to chromosome Xp22.2 and encodes a seven transmembrane domain protein. Whereas normal human pancreas and stomach express GRPR, normal lung, colon and prostate do not. Well-differentiated colon tumors coexpress GRP and GRPR. Prostate carcinoma also expresses GRPR. Following exposure to nicotine, human lung fibroblasts increase expression of GRPR. Aberrant GRPR expression occurs more frequently in female normal lung than male normal lung, and may account for the increased susceptibility of women to tobacco-induced lung cancer.

REFERENCES

- Spindel, E.R., et al. 1990. Cloning and functional characterization of a complementary DNA encoding the murine fibroblast bombesin/gastrin-releasing peptide receptor. *Mol. Endocrinol.* 4: 1956-1963.
- Maslen, G.L. and Boyd, Y. 1993. Comparative mapping of the Grpr locus on the X chromosomes of man and mouse. *Genomics* 17: 106-109.
- Sachs, G., et al. 1997. Physiology of isolated gastric endocrine cells. *Annu. Rev. Physiol.* 59: 243-256.
- 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.
- Carroll, R.E., et al. 1999. Aberrant expression of gastrin-releasing peptide and its receptor by well-differentiated colon cancers in humans. *Am. J. Physiol.* 276: G655-G665.
- Sun, B., et al. 2000. Presence of receptors for bombesin/gastrin-releasing peptide and mRNA for three receptor subtypes in human prostate cancers. *Prostate* 42: 295-303.
- Shriver, S.P., et al. 2000. Sex-specific expression of gastrin-releasing peptide receptor: relationship to smoking history and risk of lung cancer. *J. Natl. Cancer Inst.* 92: 24-33.
- Xiao, D., et al. 2001. The human gastrin-releasing peptide receptor gene structure, its tissue expression and promoter. *Gene* 264:95-103.

CHROMOSOMAL LOCATION

Genetic locus: GRPR (human) mapping to Xp22.2.

SOURCE

GRPR (F-6) is a mouse monoclonal antibody raised against amino acids 1-50 mapping at the N-terminus of GRPR of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GRPR (F-6) is recommended for detection of GRPR of human origin by Western Blotting (starting dilution 1:100, 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 GRPR siRNA (h): sc-106924, GRPR shRNA Plasmid (h): sc-106924-SH and GRPR shRNA (h) Lentiviral Particles: sc-106924-V.

Molecular Weight of endogenous GRPR: 43 kDa.

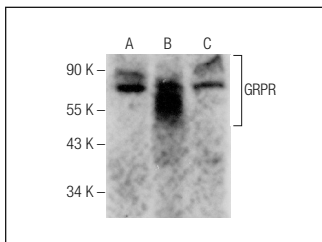
Molecular Weight of glycosylated GRPR: 70-95 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, WI-38 whole cell lysate: sc-364260 or SHP-77 whole cell lysate: sc-364258.

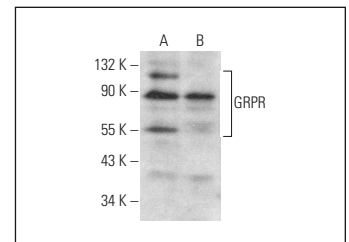
RECOMMENDED SUPPORT REAGENTS

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



GRPR (F-6): sc-377316. Western blot analysis of GRPR expression in MIA PaCa-2 (A), WI-38 (B) and SHP-77 (C) whole cell lysates.



GRPR (F-6): sc-377316. Western blot analysis of GRPR expression in MIA PaCa-2 (A) and A549 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Ranyuk, E., et al. 2013. Phthalocyanine-peptide conjugates: receptor-targeting bifunctional agents for imaging and photodynamic therapy. *J. Med. Chem.* 56: 1520-1534.

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.