

## GRPR (D-1): sc-398549



The Power to Question

## 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

1. 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.
2. 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.
3. Sachs, G., et al. 1997. Physiology of isolated gastric endocrine cells. *Annu. Rev. Physiol.* 59: 243-256.
4. 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.
5. 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.

## CHROMOSOMAL LOCATION

Genetic locus: GRPR (human) mapping to Xp22.2; Grpr (mouse) mapping to X F5.

## SOURCE

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

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GRPR (D-1) is available conjugated to agarose (sc-398549 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398549 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398549 PE), fluorescein (sc-398549 FITC), Alexa Fluor® 488 (sc-398549 AF488), Alexa Fluor® 546 (sc-398549 AF546), Alexa Fluor® 594 (sc-398549 AF594) or Alexa Fluor® 647 (sc-398549 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398549 AF680) or Alexa Fluor® 790 (sc-398549 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

GRPR (D-1) is recommended for detection of GRPR of mouse, rat, human and hamster 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 siRNA (m): sc-145783, GRPR shRNA Plasmid (h): sc-106924-SH, GRPR shRNA Plasmid (m): sc-145783-SH, GRPR shRNA (h) Lentiviral Particles: sc-106924-V and GRPR shRNA (m) Lentiviral Particles: sc-145783-V.

Molecular Weight of endogenous GRPR: 43 kDa.

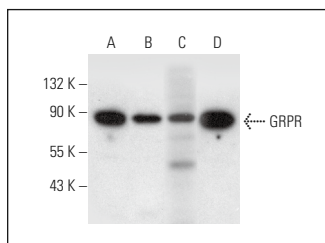
Molecular Weight of glycosylated GRPR: 70-95 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, LADMAC whole cell lysate: sc-364189 or NIH/3T3 whole cell lysate: sc-2210.

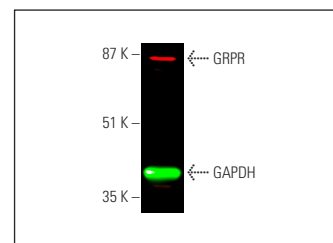
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



GRPR (D-1): sc-398549. Western blot analysis of GRPR expression in LADMAC (A), NIH/3T3 (B), CHO (C) and MIA PaCa-2 (D) whole cell lysates.



Simultaneous near-infrared western blot analysis of GRPR expression, detected with GRPR (D-1): sc-398549 and m-IgGλ BP-CFL 790: sc-516195 and GAPDH expression, detected with GAPDH (0411): sc-47724 and m-IgGκ BP-CFL 680: sc-516180 in MIA PaCa-2 whole cell lysate.

## 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.