

GPR4 (N-13): sc-70289

BACKGROUND

G protein-coupled receptors (GPRs), also known as seven transmembrane receptors, heptahelical receptors or 7TM receptors, comprise a superfamily of proteins that play a role in many different stimulus-response pathways. G protein-coupled receptors translate extracellular signals into intracellular signals (G protein activation) and they respond to a variety of signaling molecules, such as hormones and neurotransmitters. GPR4 (G protein-coupled receptor 4), also known as GPR19, is a 362 amino acid multi-pass membrane protein that belongs to the G protein-coupled receptor family and functions as an orphan receptor. GPR4 is overexpressed in cancer tissue, suggesting a role in tumor formation, and is also believed to play a critical role in endothelial cell function and may mediate the effects of sphingosylphosphorylcholine.

REFERENCES

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- Kim, K.S., et al. 2005. GPR4 plays a critical role in endothelial cell function and mediates the effects of sphingosylphosphorylcholine. *FASEB J.* 19: 819-821.
- Qiao, J., et al. 2006. Lysophosphatidylcholine impairs endothelial barrier function through the G protein-coupled receptor GPR4. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 291: L91-L101.

CHROMOSOMAL LOCATION

Genetic locus: GPR4 (human) mapping to 19q13.32; Gpr4 (mouse) mapping to 7 A3.

SOURCE

GPR4 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of GPR4 of human origin.

STORAGE

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

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-70289 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GPR4 (N-13) is recommended for detection of GPR4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

GPR4 (N-13) is also recommended for detection of GPR4 in additional species, including canine and porcine.

Suitable for use as control antibody for GPR4 siRNA (h): sc-75179, GPR4 siRNA (m): sc-75180, GPR4 shRNA Plasmid (h): sc-75179-SH, GPR4 shRNA Plasmid (m): sc-75180-SH, GPR4 shRNA (h) Lentiviral Particles: sc-75179-V and GPR4 shRNA (m) Lentiviral Particles: sc-75180-V.

Molecular Weight of GPR4: 45 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) 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.

SELECT PRODUCT CITATIONS

- Hasegawa, H., et al. 2011. Lysophosphatidylcholine enhances the suppressive function of human naturally occurring regulatory T cells through TGF-β production. *Biochem. Biophys. Res. Commun.* 415: 526-531.

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.