

GPR1 (G-12): sc-48179

BACKGROUND

G protein-coupled receptors (GPRs) are a protein family of transmembrane receptors that transmit an extracellular signal (ligand binding) into an intracellular signal (G protein activation). GPR signaling is an evolutionarily ancient mechanism used by all eukaryotes to sense environmental stimuli and mediate cell-cell communication. All of the receptors have seven membrane-spanning domains and the extracellular parts of the receptor can be glycosylated. These extracellular loops also contain two highly conserved cysteine residues which create disulfide bonds to stabilize the receptor structure. GPR1 is required for yeast-to-hypha transition on various solid hypha-inducing media, and is important for yeast cell morphology. It activates guanine nucleotide exchange on GPA2, which stimulates cAMP synthesis by glucose. In *Saccharomyces cerevisiae*, GPR1 is necessary for filamentous and invasive growth.

REFERENCES

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5. Jinno-Oue, A., et al. 2005. The synthetic peptide derived from the NH₂-terminal extracellular region of an orphan G protein-coupled receptor, GPR1, preferentially inhibits infection of X4 HIV-1. *J. Biol. Chem.* 280: 30924-30934.
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CHROMOSOMAL LOCATION

Genetic locus: GPR1 (human) mapping to 2q33.3; Gpr1 (mouse) mapping to 1 C2.

SOURCE

GPR1 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GPR1 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.

Blocking peptide available for competition studies, sc-48179 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GPR1 (G-12) is recommended for detection of GPR1 of mouse, rat and 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).

GPR1 (G-12) is also recommended for detection of GPR1 in additional species, including canine.

Suitable for use as control antibody for GPR1 siRNA (h): sc-60723, GPR1 siRNA (m): sc-60724, GPR1 shRNA Plasmid (h): sc-60723-SH, GPR1 shRNA Plasmid (m): sc-60724-SH, GPR1 shRNA (h) Lentiviral Particles: sc-60723-V and GPR1 shRNA (m) Lentiviral Particles: sc-60724-V.

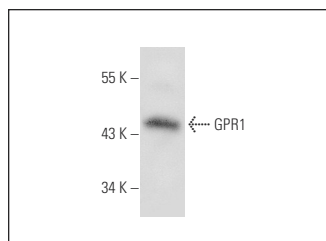
Molecular Weight of GPR1: 41 kDa.

Positive Controls: rat brain extract: sc-2392.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



GPR1 (G-12): sc-48179. Western blot analysis of GPR1 expression in rat brain tissue extract.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.