

GPR103 (N-13): sc-48187

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. GPR103 is a 455 amino acid protein with highest expression in the brain, retina, trigeminal ganglion, hypothalamus and vestibular nucleus. In peripheral tissues, GPR103 is expressed only in the heart, kidney and testis. GPR103 may regulate adrenal function. A hypothalamic neuropeptide of the RFamide family (26RFa) acts as an endogenous ligand for GPR103.

REFERENCES

1. Two new fluoroquinolones. 1992. *Med. Lett. Drugs Ther.* 34: 58-60.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606925. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Fukusumi, S., et al. 2003. A new peptidic ligand and its receptor regulating adrenal function in rats. *J. Biol. Chem.* 278: 46387-46395.
4. Thuau, R., et al. 2005. Structural studies on 26RFa, a novel human RFamide-related peptide with orexigenic activity. *Peptides* 26: 779-789.
5. Takayasu, S., et al. 2006. A neuropeptide ligand of the G protein-coupled receptor GPR103 regulates feeding, behavioral arousal, and blood pressure in mice. *Proc. Nat. Acad. Sci. USA* 103: 7438-7443.

CHROMOSOMAL LOCATION

Genetic locus: GPR103 (human) mapping to 4q27; Gpr103 (mouse) mapping to 3 B.

SOURCE

GPR103 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of GPR103 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-48187 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

GPR103 (N-13) is recommended for detection of GPR103 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).

GPR103 (N-13) is also recommended for detection of GPR103 in additional species, including equine.

Suitable for use as control antibody for GPR103 siRNA (h): sc-60729, GPR103 siRNA (m): sc-60730, GPR103 shRNA Plasmid (h): sc-60729-SH, GPR103 shRNA Plasmid (m): sc-60730-SH, GPR103 shRNA (h) Lentiviral Particles: sc-60729-V and GPR103 shRNA (m) Lentiviral Particles: sc-60730-V.

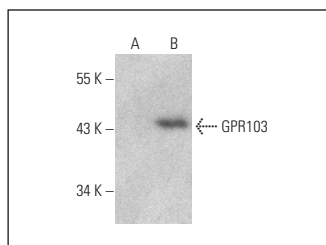
Molecular Weight of GPR103: 49 kDa.

Positive Controls: Daudi cell lysate: sc-2415 or GPR103 transfected CHO whole cell lysate.

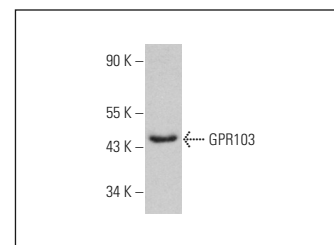
RECOMMENDED SECONDARY REAGENTS

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



GPR103 (N-13): sc-48187. Western blot analysis of GPR103 expression in non-transfected CHO (A) and mouse GPR103 transfected CHO (B) whole cell lysates.



GPR103 (N-13): sc-48187. Western blot analysis of GPR103 expression in Daudi whole cell lysate.

PROTOCOLS

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