

GPR38 (D-19): sc-5450

BACKGROUND

Motilin is a widely conserved 22 amino acid peptide hormone secreted from enterochromaffin cells of the gastrointestinal tract. Within the intestines, motilin potentiates intestinal motility by inducing contractions of the duodenum and through binding to surface receptors, designated GPR38 (G-protein coupled receptor 38). These motilin receptors are predominantly expressed in stomach, thyroid and bone marrow, and they are related to other G protein coupled receptors located in the pituitary and hypothalamus, which mediate the signaling for growth hormone secretagogues. The gene encoding GPR38 is alternately spliced at the carboxy terminus to generate two related proteins that are designated GPR38-A and GPR38-B. Sequence comparisons of the two isoforms indicate that GPR38-A contains seven transmembrane domains while GPR38-B is predicted to contain only five transmembrane regions. Consistent with other G protein coupled receptors, GPR38 activates phospholipase C signal transduction pathways and induces intracellular calcium mobilization after binding of motilin.

REFERENCES

1. Brown, J.C., et al. 1973. Motilin, a gastric motor activity stimulating polypeptide: the complete amino acid sequence. *Can. J. Biochem.* 51: 533-537.
2. Depoortere, I. and Peeters, T.L. 1995. Transduction mechanism of motilin and motilides in rabbit duodenal smooth muscle. *Regul. Pept.* 55: 227-235.
3. McKee, K.K., et al. 1997. Cloning and characterization of two human G protein-coupled receptor genes (GPR38 and GPR39) related to the growth hormone secretagogue and neurotensin receptors. *Genomics* 46: 426-434.
4. Smith, R.G., et al. 1997. Peptidomimetic regulation of growth hormone secretion. *Endocr. Rev.* 18: 621-645.
5. Tan, C.P., et al. 1998. Cloning and characterization of a human and murine T cell orphan G protein-coupled receptor similar to the growth hormone secretagogue and neurotensin receptors. *Genomics* 52: 223-229.
6. Feighner, S.D., et al. 1999. Receptor for motilin identified in the human gastrointestinal system. *Science* 284: 2184-2188.

CHROMOSOMAL LOCATION

Genetic locus: MLNR (human) mapping to 13q14.2.

SOURCE

GPR38 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GPR38 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-5450 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

GPR38 (D-19) is recommended for detection of GPR38 of 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).

GPR38 (D-19) is also recommended for detection of GPR38 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for GPR38 siRNA (h): sc-43812, GPR38 shRNA Plasmid (h): sc-43812-SH and GPR38 shRNA (h) Lentiviral Particles: sc-43812-V.

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.

STORAGE

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

PROTOCOLS

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