SANTA CRUZ BIOTECHNOLOGY, INC.

GPR153 (C-15): sc-138318

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. GPR153 (G protein-coupled receptor 153), also known as PGR1, is a 609 amino acid multi-pass membrane protein that functions as an orphan receptor and belongs to the GPR1 family. The gene encoding GPR153 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

1. Shaaban, S., et al. 2001. Orphan G protein-coupled receptors: from DNA to drug targets. Curr. Opin. Drug. Discov. Devel. 4: 535-547.
2. Menzaghi, F., et al. 2002. Constitutively activated G protein-coupled receptors: a novel approach to CNS drug discovery. Curr. Drug Targets CNS Neurol. Disord. 1.: 105-121.
3. Szekeres, P.G. 2002. Functional assays for identifying ligands at orphan G protein-coupled receptors. Recept. Channels 8: 297-308.
4. Vassilatis, D.K., et al. 2003. The G protein-coupled receptor repertoires of human and mouse. Proc. Natl. Acad. Sci. USA 100: 4903-4908.
5. Gloriam, D.E., et al. 2005. Nine new human Rhodopsin family G-protein coupled receptors: identification, sequence characterisation and evolutionary relationship. Biochim. Biophys. Acta 1722: 235-246.
6. Davies, M.N., et al. 2011. Present perspectives on the automated classification of the G-protein coupled receptors (GPCRs) at the protein sequence level. Curr. Top. Med. Chem. 11: 1994-2009.

CHROMOSOMAL LOCATION

Genetic locus: GPR153 (human) mapping to 1p36.31; Gpr153 (mouse) mapping to 4 E2.

SOURCE

GPR153 (C-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of GPR153 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138318 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GPR153 (C-15) is recommended for detection of GPR153 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other GPR family members.

GPR153 (C-15) is also recommended for detection of GPR153 in additional species, including canine.

Suitable for use as control antibody for GPR153 siRNA (h): sc-78710, GPR153 siRNA (m): sc-145710, GPR153 shRNA Plasmid (h): sc-78710-SH, GPR153 shRNA Plasmid (m): sc-145710-SH, GPR153 shRNA (h) Lentiviral Particles: sc-78710-V and GPR153 shRNA (m) Lentiviral Particles: sc-145710-V.

Molecular Weight of GPR153: 65 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.

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.