SANTA CRUZ BIOTECHNOLOGY, INC.

GPR111 (T-17): sc-242942

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

G protein-coupled receptors (GPRs or GPCRs), also known as seven transmembrane receptors, heptahelical receptors or 7TM receptors, are members of the largest protein family and play a role in many different stimulus-response pathways. G protein-coupled receptors mediate extracellular signals into intracellular signals (G protein activation). They respond to a wide variety of signaling molecules, including hormones, neurotransmitters and other proteins and peptides. GPR proteins are usually integral seven pass membrane proteins with some conserved amino acid regions. GPR111 (G protein-coupled receptor 111), also known as PGR20, is a 708 amino acid multi-pass membrane protein that belongs to the G-protein coupled receptor 2 family and LN-TM7 subfamily. Containing one GPS domain and existing as two alternatively spliced isoforms, GPR111 may function as an orphan receptor.

REFERENCES

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3. Fredriksson, R., et al. 2003. There exist at least 30 human G-protein-coupled receptors with long Ser/Thr-rich N-termini. Biochem. Biophys. Res. Commun. 301: 725-734.
4. Mungall, A.J., et al. 2003. The DNA sequence and analysis of human chromosome 6. Nature 425: 805-811.
5. Vassilatis, D.K., et al. 2003. The G protein-coupled receptor repertoires of human and mouse. Proc. Natl. Acad. Sci. USA 100: 4903-4908.
6. Bjarnadóttir, T.K., et al. 2004. The human and mouse repertoire of the adhesion family of G-protein-coupled receptors. Genomics 84: 23-33.
7. Covington, D.K., et al. 2006. The G-protein-coupled receptor 40 family (GPR40-GPR43) and its role in nutrient sensing. Biochem. Soc. Trans. 34: 770-773.
8. Yonezawa, T., et al. 2007. Short-chain fatty acids induce acute phosphorylation of the p38 mitogen-activated protein kinase/heat shock protein 27 pathway via GPR43 in the MCF-7 human breast cancer cell line. Cell. Signal. 19: 185-193.
9. Rayasam, G.V., et al. 2007. Fatty acid receptors as new therapeutic targets for diabetes. Expert Opin. Ther. Targets. 11: 661-671.

CHROMOSOMAL LOCATION

Genetic locus: Gpr111 (mouse) mapping to 17 B3.

SOURCE

GPR111 (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GPR111 of mouse origin.

RESEARCH USE

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

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-242942 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GPR111 (T-17) is recommended for detection of GPR111 of mouse and rat 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); non cross-reactive with other GPR family members.

Suitable for use as control antibody for GPR111 siRNA (m): sc-145694, GPR111 shRNA Plasmid (m): sc-145694-SH and GPR111 shRNA (m) Lentiviral Particles: sc-145694-V.

Molecular Weight of GPR111: 79 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.

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.