SANTA CRUZ BIOTECHNOLOGY, INC.

GPR142 (S-15): sc-164527

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. GPR142 (G protein-coupled receptor 142), also known as PGR2, is a 462 amino acid multi-pass membrane protein that functions as an orphan receptor and belongs to the GPR1 family. Expressed at highest levels in the ventrolateral region of caudate putamen, zona incerta, medial mammillary nucleus and habenular nucleus, GP.R142 is encoded by a gene that maps to human chromosome 17q25.1.

REFERENCES

1. Probst, W.C., et al. 1992. Sequence alignment of the G-protein coupled receptor superfamily. DNA Cell Biol. 11: 1-20.
2. Fredriksson, R., et al. 2003. Seven evolutionarily conserved human rhodopsin G protein-coupled receptors lacking close relatives. FEBS Lett. 554: 381-388.
3. Vassilatis, D.K., et al. 2003. The G protein-coupled receptor repertoires of human and mouse. Proc. Natl. Acad. Sci. USA 100: 4903-4908.
4. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 609046. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Matsuo, A., et al. 2005. Molecular cloning and characterization of a novel Gq-coupled orphan receptor GPRg1 exclusively expressed in the central nervous system. Biochem. Biophys. Res. Commun. 331: 363-369.
6. Pelé, J., et al. 2011. Multidimensional scaling reveals the main evolutionary pathways of class A G-protein-coupled receptors. PLoS ONE 6: e19094.
7. Miller, L.J., et al. 2011. Ligand binding and activation of the secretin receptor, a prototypic family B G protein-coupled receptor. Br .J. Pharmacol. E-published.

CHROMOSOMAL LOCATION

Genetic locus: GPR142 (human) mapping to 17q25.1.

SOURCE

GPR142 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of GPR142 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-164527 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.

APPLICATIONS

GPR142 (S-15) is recommended for detection of GPR142 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); non cross-reactive with other GPR family members.

GPR142 (S-15) is also recommended for detection of GPR142 in additional species, including equine.

Suitable for use as control antibody for GPR142 siRNA (h): sc-93910, GPR142 shRNA Plasmid (h): sc-93910-SH and GPR142 shRNA (h) Lentiviral Particles: sc-93910-V.

Molecular Weight of GPR142: 51 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.

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.