SANTA CRUZ BIOTECHNOLOGY, INC.

P2Y9 (P-18): sc-46022

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Nucleotides are emerging as important extracellular signaling molecules that mediate several effects, such as proliferation, differentiation, chemotaxis and cytokine release. The P2 receptor family is activated by the binding of nucleotides and is divided into two subfamilies, P2X and P2Y. The P2X receptor family is comprised of ligand-gated ion channels that allow for the increased permeability of calcium into the cell in response to extracellular ATP. The P2Y receptor family are G protein-coupled receptors which mediate the effects of extracellular nucleotides, primarily through the activation of phospholipase C. To some extent, the P2Y receptors can also activate potassium channels or, alternatively, inhibit adenylate cyclase and N-type calcium channels in response to extracellular nucleotides. P2Y9 is activated by lysophosphatidic acid (LPA), a lipid mediator involved in cell proliferation, differentiation, survival and death. In hamsters, P2Y9 mRNA is significantly expressed in ovary tissue compared to other tissues, and innervation with 1-oleoly LPA increases intracellular calcium ion concentration and stimulates adenylyl cyclase activity. P2Y9 is structurally related to nucleotide receptors, and shares 20-24% amino acid homology with the three other LPA receptors (LPA1, LPA2, LPA3).

REFERENCES

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3. O'Dowd, B.F., et al. 1997. Cloning and chromosomal mapping of four putative novel human G protein-coupled receptor genes. Gene 187: 75-81.
4. Oury, C., et al. 2000. A natural dominant negative P2X1 receptor due to deletion of a single amino acid residue. J. Biol. Chem. 275: 22611-22614.
5. Ding, S., et al. 2000. Inactivation of P2X2 purinoceptors by divalent cations. J. Physiol. 2: 199-214.
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7. Di Virgilio, F., et al. 2001. Nucleotide receptors: an emerging family of regulatory molecules in blood cells. Blood 97: 587-600.
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CHROMOSOMAL LOCATION

Genetic locus: GPR23 (human) mapping to Xq21.1; Gpr23 (mouse) mapping to X D.

SOURCE

P2Y9 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of P2Y9 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-46022 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

P2Y9 (P-18) is recommended for detection of P2Y9 of mouse, rat and 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).

P2Y9 (P-18) is also recommended for detection of P2Y9 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for P2Y9 siRNA (h): sc-45614, P2Y9 siRNA (m): sc-45615, P2Y9 shRNA Plasmid (h): sc-45614-SH, P2Y9 shRNA Plasmid (m): sc-45615-SH, P2Y9 shRNA (h) Lentiviral Particles: sc-45614-V and P2Y9 shRNA (m) Lentiviral Particles: sc-45615-V.

Molecular Weight of P2Y9: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or KNRK whole cell lysate: sc-2214.

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.

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.