SANTA CRUZ BIOTECHNOLOGY, INC.

P2Y4 (H-17): sc-17634

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. The P2Y receptors are differentially expressed in several tissue types, such as heart, lung and brain. However, all P2Y receptors are expressed in leukocytes, which suggests a role for the P2Y receptor family in the activation of leukocytes and platelets in response to inflammation or vascular damage.

REFERENCES

1. Akbar, G.K., et al. 1996. Molecular cloning of a novel P2 purinoceptor from human erythroleukemia cells. J. Biol. Chem. 271: 18363-18367.
2. North, R.A., et al. 1997. Nucleotide receptors. Curr. Opin. Neurobiol. 7: 346-357.
3. Burnstock, G. 2000. P2X receptors in sensory neurones. Br. J. Anaesth. 84: 476-488.
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.

CHROMOSOMAL LOCATION

Genetic locus: P2RY4 (human) mapping to Xq13.1; P2ry4 (mouse) mapping to X C3.

SOURCE

P2Y4 (H-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of P2Y4 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-17634 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.

RESEARCH USE

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

APPLICATIONS

P2Y4 (H-17) is recommended for detection of P2Y4 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

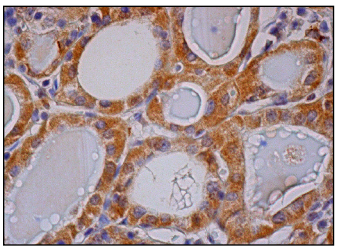
P2Y4 (H-17) is also recommended for detection of P2Y4 in additional species, including bovine and porcine.

Suitable for use as control antibody for P2Y4 siRNA (h): sc-42581, P2Y4 siRNA (m): sc-42582, P2Y4 shRNA Plasmid (h): sc-42581-SH, P2Y4 shRNA Plasmid (m): sc-42582-SH, P2Y4 shRNA (h) Lentiviral Particles: sc-42581-V and P2Y4 shRNA (m) Lentiviral Particles: sc-42582-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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



P2Y4 (H-17): sc-17634. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Resende, R.R., et al. 2007. P19 embryonal carcinoma cells as *in vitro* model for studying purinergic receptor expression and modulation of N-methyl-D-aspartate-glutamate and acetylcholine receptors during neuronal differentiation. Neuroscience 146: 1169-1181.
2. Matta, C., et al. 2014. Purinergic signalling is required for calcium oscillations in migratory chondrogenic progenitor cells. Pflugers Arch. 467: 429-442.