

P2X4 (N-15): sc-15187

BACKGROUND

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. There are seven P2X receptors, P2X1, P2X2, P2X3, P2X4, P2X5, P2X6 and P2X7, which form either homomeric or heteromeric channels or both, and they are characterized by intracellular amino and carboxy-termini. P2X receptors are expressed in a wide variety of tissues, including neurons, prostate, bladder, pancreas, colon, testis and ovary. The major function of the P2X receptors is to mediate synaptic transmissions between neurons and to other tissues via the binding of extracellular ATP, which acts as a neurotransmitter. The P2X receptors may be involved in the onset of necrosis or apoptosis after prolonged exposure to high concentrations of extracellular ATP.

REFERENCES

1. Longhurst, P.A., et al. 1996. The human P2X1 receptor: molecular cloning, tissue distribution, and localization to chromosome 17. *Biochim. Biophys. Acta* 1308: 185-188.
2. Di Virgilio, F., et al. 1998. Cytolytic P2X purinoceptors. *Cell Death Differ.* 5: 191-199.
3. Alexander, K., et al. 1999. Allosteric modulation and accelerated resensitization of human P2X3 receptors by cibacron blue. *J. Pharmacol. Exp. Ther.* 291: 1135-1142.
4. Burnstock, G. 2000. P2X receptors in sensory neurones. *Br. J. Anaesth.* 84: 476-488.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: P2RX4 (human) mapping to 12q24.31; P2rx4 (mouse) mapping to 5 F.

SOURCE

P2X4 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of P2X4 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-15187 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

P2X4 (N-15) is recommended for detection of P2X4 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).

P2X4 (N-15) is also recommended for detection of P2X4 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for P2X4 siRNA (h): sc-42569, P2X4 siRNA (m): sc-42570, P2X4 shRNA Plasmid (h): sc-42569-SH, P2X4 shRNA Plasmid (m): sc-42570-SH, P2X4 shRNA (h) Lentiviral Particles: sc-42569-V and P2X4 shRNA (m) Lentiviral Particles: sc-42570-V.

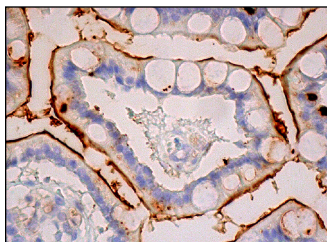
Molecular Weight of P2X4: 70 kDa.

Positive Controls: Rat thymus extract: sc-2401 or mouse thymus extract: sc-2406.

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



P2X4 (N-15): sc-15187. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing apical membrane 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.

RESEARCH USE

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