

P2X1 (H-100): sc-25692

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.
6. Ding, S., et al. 2000. Inactivation of P2X2 purinoceptors by divalent cations. *J. Physiol.* 522: 199-214.
7. North, R.A., et al. 2000. Pharmacology of cloned P2X receptors. *Annu. Rev. Pharmacol. Toxicol.* 40: 563-580.

CHROMOSOMAL LOCATION

Genetic locus: P2RX1 (human) mapping to 17p13.2; P2rx1 (mouse) mapping to 11 B4.

SOURCE

P2X1 (H-100) is a rabbit polyclonal antibody raised against amino acids 191-290 mapping within an internal region of P2X1 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.

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

P2X1 (H-100) is recommended for detection of P2X1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

P2X1 (H-100) is also recommended for detection of P2X1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for P2X1 siRNA (h): sc-42563, P2X1 siRNA (m): sc-42564, P2X1 shRNA Plasmid (h): sc-42563-SH, P2X1 shRNA Plasmid (m): sc-42564-SH, P2X1 shRNA (h) Lentiviral Particles: sc-42563-V and P2X1 shRNA (m) Lentiviral Particles: sc-42564-V.

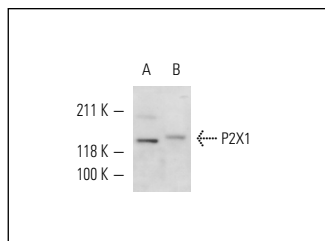
Molecular Weight of P2X1 dimer: 70/140 kDa.

Positive Controls: BYDP whole cell lysate: sc-364368, human platelet whole cell lysate: sc-363773 or MTE1D whole cell lysate: sc-364918.

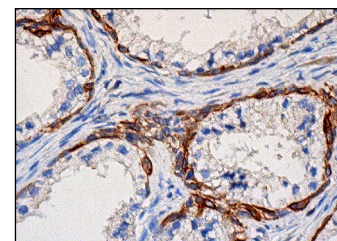
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



P2X1 (H-100): sc-25692. Western blot analysis of P2X1 expression in BYDP (A) and MTE1D (B) whole cell lysates.



P2X1 (H-100): sc-25692. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Nunes, A.R., et al. 2012. Effect of development on $[Ca^{2+}]_i$ transients to ATP in petrosal ganglion neurons: a pharmacological approach using optical recording. *J. Appl. Physiol.* 112: 1393-1402.