SANTA CRUZ BIOTECHNOLOGY, INC.

P2X7 (H-265): sc-25698

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. The seven P2X receptors, P2X1-P2X7, form either homomeric or heteromeric channels or both. 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.

CHROMOSOMAL LOCATION

Genetic locus: P2RX7 (human) mapping to 12q24.31; P2rx7 (mouse) mapping to 5 F.

SOURCE

P2X7 (H-265) is a rabbit polyclonal antibody raised against amino acids 331-595 mapping at the C-terminus of P2X7 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.

APPLICATIONS

P2X7 (H-265) is recommended for detection of P2X7 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for P2X7 siRNA (h): sc-42575, P2X7 siRNA (m): sc-42576, P2X7 shRNA Plasmid (h): sc-42575-SH, P2X7 shRNA Plasmid (m): sc-42576-SH, P2X7 shRNA (h) Lentiviral Particles: sc-42575-V and P2X7 shRNA (m) Lentiviral Particles: sc-42576-V.

Molecular Weight of native P2X7: 65 kDa.

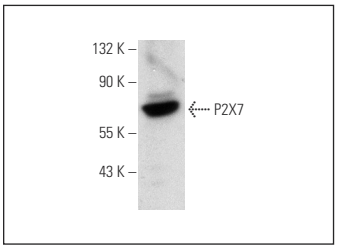
Molecular Weight of glycosylated P2X7: 85 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or SK-MEL-28 cell lysate: sc-2236.

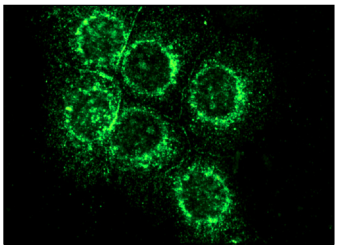
RECOMMENDED SECONDARY REAGENTS

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.

DATA



P2X7 (H-265): sc-25698. Western blot analysis of P2X7 expression in SK-MEL-28 whole cell lysate.



P2X7 (H-265): sc-25698. Immunofluorescence staining of methanol-fixed JAR cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Lenertz, L.Y., et al. 2010. Mutation of putative N-linked glycosylation sites on the human nucleotide receptor P2X7 reveals a key residue important for receptor function. Biochemistry 49: 4611-4619.
2. Li, H.J., et al. 2011. P2Y2 receptor-mediated modulation of estrogen-induced proliferation of breast cancer cells. Mol. Cell. Endocrinol. 338: 28-37.
3. Miraglia, E., et al. 2011. Statins exhibit anticancer effects through modifications of the p-Akt signaling pathway. Int. J. Oncol. 40: 867-875.
4. Svennersten, K., et al. 2015. Localization of P2X receptor subtypes 2, 3 and 7 in human urinary bladder. BMC Urol. 15: 81.

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.