

P2X7 (Y-14): sc-31499

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, 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

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CHROMOSOMAL LOCATION

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

SOURCE

P2X7 (Y-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of P2X7 of human origin.

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.

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-31499 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

P2X7 (Y-14) 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), 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 Control: A-431 whole cell lysate: sc-2201.

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.

SELECT PRODUCT CITATIONS

- Noguchi, T., et al. 2008. Requirement of reactive oxygen species-dependent activation of ASK1-p38 MAPK pathway for extracellular ATP-induced apoptosis in macrophage. *J. Biol. Chem.* 283: 7657-7665.

PROTOCOLS

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Try **P2X7 (D-1): sc-514962** or **P2X7 (Hano43): sc-134224**, our highly recommended monoclonal alternatives to P2X7 (Y-14). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **P2X7 (D-1): sc-514962**.