

Product Information

Anti-P2X₇ Purinergic Receptor antibody produced in rabbit
affinity isolated antibody

Catalog Number **P8232**

Product Description

Anti-P2X₇ Purinergic Receptor is developed in rabbit using a synthetic peptide:

(C)KIRKEFPKTQGQYSGFKYPY

This corresponds to amino acid residues 576–595 of rat P2X₇ Receptor (Accession [Q64663](#)) Intracellular, C-terminus.¹ The epitope is highly conserved in mouse and human P2X₇. The antibody is affinity isolated using peptide-agarose.

Anti-P2X₇ Purinergic Receptor recognizes rat P2X₇ purinergic receptor by immunoblotting. The antibody may also be used for immunohistochemistry.²

ATP exerts its neuromodulatory effects via activation of purinergic receptors. Currently, 14 purinergic receptors are known and can be split into two classes: P2X and P2Y, with each class containing seven members.³ The P2X receptor subunits (P2X₁–P2X₇) can form either homomultimers or heteromultimers, which then act as ligand-gated cation channels.⁴ P2X receptors are differentially distributed throughout the adrenal gland, heart, and CNS.⁵⁻⁷

In the CNS, P2X receptors are involved in sensory transmission, sensory-motor integration, motor and autonomic control, and overall CNS homeostasis.⁷ Further, P2X receptors are implicated in modulating cortical plasticity, such as hippocampal plasticity.⁸ Recent evidence suggests P2X receptors in the spinal cord facilitate GABA release and may be important in processing nociceptive information.⁹ Peripherally, P2X receptors modulate processes involved in the physiological turnover of squamous epithelial cells¹⁰ and also modulate osteoclasts to stimulate bone resorption.¹¹

The P2X receptors in the spinal cord may be implicated in the induction or mediation of prolonged persistent pain.¹² Further, there may be a fine balance between function and disease with P2X modulation of cellular proliferation and apoptosis.^{13,14}

Researchers have begun to learn about the structure and function of these purinergic receptors. However, much remains to be determined about their precise cellular localization, *in vivo* physiological roles, roles in disease states, and possible routes to modulate their structure/function to ameliorate effects of disease.

Reagent

Supplied as a lyophilized powder from a solution of phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 0.05% sodium azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the lyophilized vial with 50 µl or 0.2 ml of deionized water, depending on sample size. Antibody dilutions should be made in buffer containing 1% bovine serum albumin.

Storage/Stability

Prior to reconstitution, store at –20 °C. After reconstitution, the stock antibody solution may be stored at 2–8 °C for up to two weeks. For extended storage, freeze at –20 °C or below, in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. Centrifuge all antibody preparations before use (10,000 × *g* for 5 minutes). Working dilution samples should be discarded if not used within 12 hours.

Product Profile

The recommended working dilution is 1:200-1:1,000 by Direct Immunoblotting.

Note: In order to obtain the best results using various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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TT,SC,PHC,MAM 12/18-1