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ProductInformation

ANTI-P2X2 PURINERGIC RECEPTOR
Developed in Rabbit, Affinity Isolated Antibody

Product Number **P 7982**

Product Description

Anti-P2X2 Purinergic Receptor is developed in rabbit using a synthetic peptide corresponding to amino acids 457-472 of rat P2X2 (swiss-Prot P49653)(with additional N-terminal cysteine) as immunogen.[1] The antibody is affinity isolated using peptide-agarose.

Anti-P2X2 Purinergic Receptor recognizes rat P2X2 purinergic receptor by immunoblotting. The antibody may also be used for immunohistochemistry.[2,3]

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.[4] The P2X receptor subunits (P2X1-P2X7) can form either homomultimers or heteromultimers which then act as ligand-gated cation channels.[5] P2X receptors are differentially distributed throughout the adrenal gland, heart and CNS.[6,7,8]

In the CNS, P2X receptors are involved in sensory transmission, sensory-motor integration, motor and autonomic control and overall CNS homeostasis.[8] Further, P2X receptors are implicated in modulating cortical plasticity, such as hippocampal plasticity.[9] Recent evidence suggests that P2X receptors in the spinal cord, facilitate GABA release and may be important in processing nociceptive information.[10] Peripherally, P2X receptors modulate processes involved in the physiological turnover of squamous epithelial cells[11] and also modulate osteoclasts to stimulate bone resorption.[12]

The P2X receptors in spinal cord may be implicated in the induction or mediation of prolonged persistent pain.[13] Further, there may be a fine balance between function and disease with P2X modulation of cellular proliferation and apoptosis.[14,15]

Recent advances have allowed researchers to begin 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.

Reagents

Anti-P2X2 Purinergic Receptor is supplied lyophilized at approximately 0.3 mg/ml from phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin, 5% sucrose and 0.025% sodium azide.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Preparation Instructions

Reconstitute the lyophilized vial with 0.05 ml or 0.2 ml deionized water. Antibody dilutions should be made in buffer containing 1-3% 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 one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

The recommended working dilution is 1:200 (1.5 µg/ml) for immunoblotting using an anti-rabbit IgG-peroxidase conjugate and detection by ECL.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

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