

Product datasheet for **TA328992**

P2rx4 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3,000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)KKYKYVEDYEQGLSGEMNQ, corresponding to amino acid residues 370-388 of rat P2X4 Receptor. Intracellular, C-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	purinergic receptor P2X 4
Database Link:	NP_113782 Entrez Gene 5025 Human Entrez Gene 18438 Mouse Entrez Gene 29659 Rat P51577



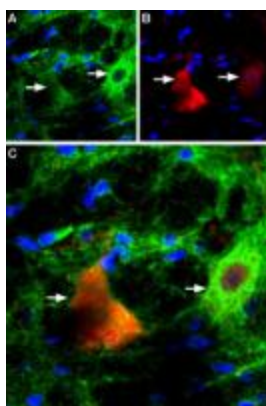
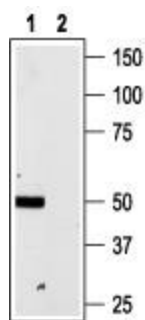
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Background:

The P2X receptors belong to the ligand-gated ion channel family and are activated by extracellular ATP. The structure and function of the P2X receptors, which were mainly investigated using in vitro models, indicate their involvement in synaptic communication, cell death, and differentiation. Seven mammalian P2X receptor subtypes (P2X1-P2X7) have been identified and cloned.^{1,2,3} All P2X receptor subtypes share the same structure of intracellular N and C-termini, two membrane-spanning domains and a large extracellular loop. All P2X subunits can assemble to form homomeric or heteromeric functional channels with the exception of P2X6, which only appears to function as part of a heteromeric complex.⁴⁻⁹ The various P2X receptors show distinct expression patterns. P2X1-6 have been found in the central and peripheral nervous system, while the P2X7 receptor is predominantly found in cells of the immune system.⁴ The P2X2 receptor subunit has a widespread tissue distribution in autonomic neurons, but it is generally found to be co-expressed with one or more subtypes. Overexpression of P2X4 was demonstrated in microglia and in the spinal dorsal horn following peripheral nerve injury. It has been suggested that activation of P2X4 along with p38 MAPK is essential for the development of allodynia (pain from a stimulus that doesn't normally elicit pain) following nerve injury. Inhibition of P2X4 expression in spinal microglia has been suggested as a novel therapeutic approach for the treatment of allodynia.¹⁰

Synonyms:

P2X4; P2X4R

Product images:

Western blot analysis of rat brain membranes: 1. Anti-P2X4 Receptor antibody, (1:200). 2. Anti-P2X4 Receptor antibody, preincubated with the control peptide antigen.

Expression of P2X4 Receptor in rat brain. Immunohistochemical staining of rat brain red nucleus using Anti-P2X4 Receptor antibody. A. P2X4 Receptor (green) appears in fibers surrounding cell shapes (arrows). B. Calbindin 28K (red) appears in large neurons. C. Merge of P2X4 Receptor and Calbindin 28K suggests variable density of P2X4 Receptor expressing fibers on red nucleus neurons. DAPI is used as the counterstain (blue).