10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-P2RX7 Antibody

Catalog # ABO11437

Product Information

Application	WB
Primary Accession	Q64663
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for P2X purinoceptor 7(P2RX7) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	29665
Other Names	P2X purinoceptor 7, P2X7, ATP receptor, P2Z receptor, Purinergic receptor, P2rx7
Calculated MW	68392
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Cell membrane ; Multi-pass membrane protein.
Source	Eukaryota
Protein Name	P2X purinoceptor 7
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of rat P2RX7(1-20aa MPACCSWNDVFQYETNKVTR), different from the related mouse sequence by one amino acid, and from the related human sequence by two amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

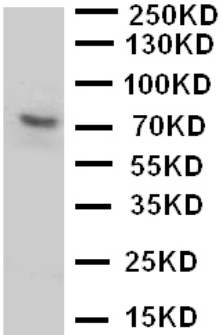
Protein Information

Name	P2rx7
Function	ATP-gated nonselective transmembrane cation channel that requires high millimolar concentrations of ATP for activation (PubMed:10204537, PubMed:39107314, PubMed:8614837). Upon ATP binding, it rapidly opens to allow the influx of small cations Na(+) and Ca(2+), and the K(+) efflux (PubMed:8614837). Also has the ability to form a large pore in the cell membrane, allowing the passage of large cationic molecules (PubMed:17036048, PubMed:18852304). In microglia, may mediate the transmembrane transport of exogenous NADPH (By similarity). In immune cells, P2RX7 acts as a molecular sensor in pathological inflammatory states by detecting and responding to high local concentrations of extracellar ATP. In microglial cells, P2RX7 activation leads to the release of pro-inflammatory cytokines, such as IL-1beta and IL-18, through the activation of the NLRP3 inflammasome and caspase-1. Cooperates with KCNK6 to activate NLRP3 inflammasome (By similarity). Activates death pathways leading to apoptosis and autophagy (By similarity). Activates death pathways leading to pyroptosis (By similarity). Involved in the homeostatic wound healing response to tissue injury, a multistep cascade that guides neutrophil migration to necrotic sites while avoiding collateral damage of healthy tissues. Senses ATP released from necrotic cells triggering activation of NLRP3 inflammasome and neutrophil adhesion to the vascular endothelium close to the injury site.
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:Q99572}; Multi-pass membrane protein

Background

P2X purinoceptor 7, also called P2X7, is a protein that in humans is encoded by the P2RX7 gene. The product of this gene belongs to the family of purnoceptors for ATP. P2RX7 was mapped to chromosome 12q24 by fluorescence in situ hybridization. It is a receptor for ATP that acts as a ligand-gated ion channel. This gene is responsible for ATP-dependent lysis of macrophages through the formation of membrane pores permeable to large molecules. It could function in both fast synaptic transmission and the ATP-mediated lysis of antigen-presenting cells.

Images



Anti-P2RX7 antibody, ABO11437, Western blottingWB: U87 Cell Lysate

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