

P2RX7 / P2X7 Antibody (C-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS16429

Specification

P2RX7 / P2X7 Antibody (C-Terminus) - Product Information

Application	IHC, IF, ICC
Primary Accession	Q99572
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	69kDa KDa

P2RX7 / P2X7 Antibody (C-Terminus) - Additional Information

Gene ID 5027

Other Names

P2X purinoceptor 7, P2X7, ATP receptor, P2Z receptor, Purinergic receptor, P2RX7

Target/Specificity

P2RX7 antibody is human, mouse, and rat reactive. Multiple isoforms of P2RX7 are known to exist.

Reconstitution & Storage

Long term: -20°C; Short term: +4°C. Avoid repeat freeze-thaw cycles.

Precautions

P2RX7 / P2X7 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

P2RX7 / P2X7 Antibody (C-Terminus) - Protein Information

Name P2RX7

Function

ATP-gated nonselective transmembrane cation channel that requires high millimolar concentrations of ATP for activation (PubMed: [17483156](http://www.uniprot.org/citations/17483156), PubMed: [25281740](http://www.uniprot.org/citations/25281740), PubMed: [9038151](http://www.uniprot.org/citations/9038151)). Upon ATP binding, it rapidly opens to allow the influx of small cations Na(+) and Ca(2+), and the K(+) efflux (PubMed: [17483156](http://www.uniprot.org/citations/17483156), PubMed: [20453110](http://www.uniprot.org/citations/20453110), PubMed: [28235784](http://www.uniprot.org/citations/28235784), PubMed: [39262850](http://www.uniprot.org/citations/39262850)). Also has the ability to form a large pore in the cell membrane, allowing the passage of large cationic molecules (PubMed: [17483156](http://www.uniprot.org/citations/17483156)). In microglia, may mediate NADPH transport across the plasma

membrane (PubMed:39142135). In immune cells, P2RX7 acts as a molecular sensor in pathological inflammatory states by detecting and responding to high local concentrations of extracellular 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 (PubMed:26877061). Cooperates with KCNK6 to activate NLRP3 inflammasome (By similarity). Activates death pathways leading to apoptosis and autophagy (PubMed:21821797, PubMed:23303206, PubMed:28326637). Activates death pathways leading to pyroptosis (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q64663}

Tissue Location

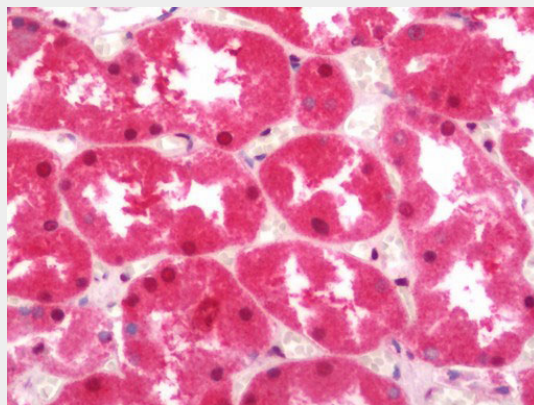
Widely expressed with highest levels in brain and immune tissues.

P2RX7 / P2X7 Antibody (C-Terminus) - Protocols

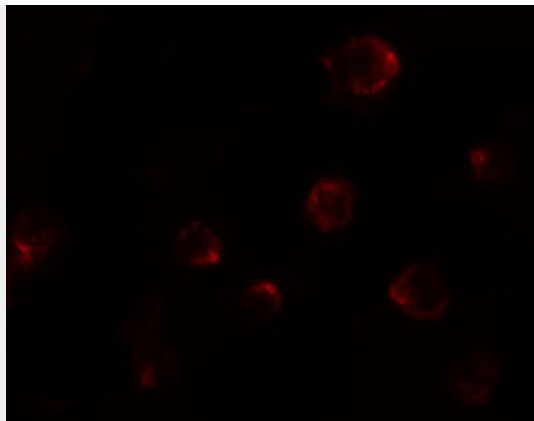
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

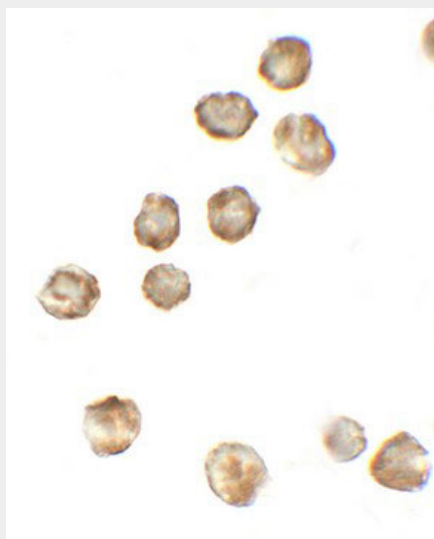
P2RX7 / P2X7 Antibody (C-Terminus) - Images



Human Kidney: Formalin-Fixed, Paraffin-Embedded (FFPE)



Immunofluorescence of P2RX7 in 3T3 cells with P2RX7 antibody at 20 ug/mL.



Immunocytochemistry of P2RX7 in 3T3 cells with P2RX7 antibody at 5 ug/mL.

P2RX7 / P2X7 Antibody (C-Terminus) - Background

Receptor for ATP that acts as a ligand-gated ion channel. Responsible for ATP-dependent lysis of macrophages through the formation of membrane pores permeable to large molecules. Could function in both fast synaptic transmission and the ATP-mediated lysis of antigen-presenting cells.

P2RX7 / P2X7 Antibody (C-Terminus) - References

- Rassendren F.,et al.J. Biol. Chem. 272:5482-5486(1997).
- Buell G.N.,et al.Recept. Channels 5:347-354(1998).
- Cheewatrakoolpong B.,et al.Biochem. Biophys. Res. Commun. 332:17-27(2005).
- Ota T.,et al.Nat. Genet. 36:40-45(2004).
- Scherer S.E.,et al.Nature 440:346-351(2006).