

P2RX7 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5674b

Specification

P2RX7 Antibody (C-term) - Product Information

Application	IHC-P, WB,E
Primary Accession	O99572
Other Accession	NP_002553.2
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	563-592

P2RX7 Antibody (C-term) - Additional Information

Gene ID 5027

Other Names

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

Target/Specificity

This P2RX7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 563-592 amino acids of human P2RX7.

Dilution

IHC-P~~1:50~100

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

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

P2RX7 Antibody (C-term) - Protein Information

Name P2RX7

Function ATP-gated nonselective transmembrane cation channel that requires high millimolar

concentrations of ATP for activation (PubMed:[17483156](#), PubMed:[25281740](#), PubMed:[9038151](#)). Upon ATP binding, it rapidly opens to allow the influx of small cations Na(+) and Ca(2+), and the K(+) efflux (PubMed:[17483156](#), PubMed:[20453110](#), PubMed:[28235784](#), PubMed:[39262850](#)). Also has the ability to form a large pore in the cell membrane, allowing the passage of large cationic molecules (PubMed:[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

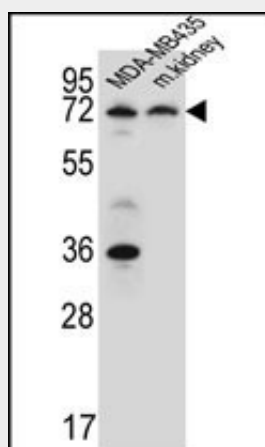
Widely expressed with highest levels in brain and immune tissues.

P2RX7 Antibody (C-term) - Protocols

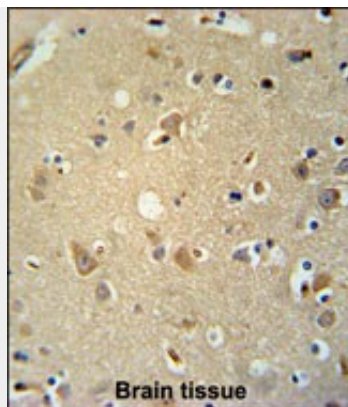
Provided below are standard protocols that you may find useful for product applications.

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

P2RX7 Antibody (C-term) - Images



P2RX7 Antibody (C-term) (Cat. #AP5674b) western blot analysis in MDA-MB435 cell line and mouse kidney tissue lysates (15ug/lane). This demonstrates the P2RX7 antibody detected the P2RX7 protein (arrow).



P2RX7 Antibody (C-term) (Cat. #AP5674b) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the P2RX7 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

P2RX7 Antibody (C-term) - Background

P2RX7 belongs to the family of purinoceptors for ATP. This receptor functions as a ligand-gated ion channel and is responsible for ATP-dependent lysis of macrophages through the formation of membrane pores permeable to large molecules. Activation of this nuclear receptor by ATP in the cytoplasm may be a mechanism by which cellular activity can be coupled to changes in gene expression.

P2RX7 Antibody (C-term) - References

Kim, M., et al. EMBO J. 20(22):6347-6358(2001)
Gartland, A., et al. J. Bone Miner. Res. 16(5):846-856(2001)
Gu, B.J., et al. J. Biol. Chem. 276(14):11135-11142(2001)
Buell, G.N., et al. Recept. Channels 5(6):347-354(1998)
Rassendren, F., et al. J. Biol. Chem. 272(9):5482-5486(1997)

P2RX7 Antibody (C-term) - Citations

- [P2X7 Receptor Antagonism Attenuates the Intermittent Hypoxia-induced Spatial Deficits in a Murine Model of Sleep Apnea Via Inhibiting Neuroinflammation and Oxidative Stress.](#)