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Mouse Monoclonal Antibody to P2RX7

Purified Mouse Monoclonal Antibody
Catalog # AO2457a

Product Information

Application	WB, IHC, FC, E
Primary Accession	Q99572
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	7G1D6
Isotype	Mouse IgG2b
Calculated MW	68585
Description	The product of this gene 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. Multiple alternatively spliced variants have been identified, most of which fit nonsense-mediated decay (NMD) criteria.;
Immunogen	Purified recombinant fragment of human P2RX7 (AA: 226-452) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide
Application Note	ELISA: 1/10000; WB: 1/500 - 1/2000; IHC: 1/200 - 1/1000; FCM: 1/200 - 1/400

Additional Information

Gene ID	5027
Other Names	P2X7
Dilution	WB~~1:1000 IHC~~1:100~500 FC~~1:10~50 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Monoclonal Antibody to P2RX7 is for research use only and not for use in diagnostic or therapeutic procedures.

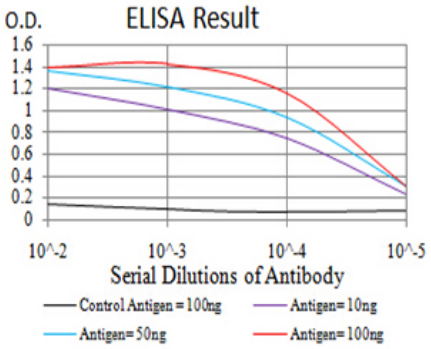
Protein Information

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 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 (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.

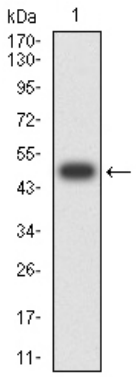
References

1.Cancer Sci. 2015 Sep;106(9):1224-31. ; 2.J Hypertens. 2013 Dec;31(12):2362-9. ;

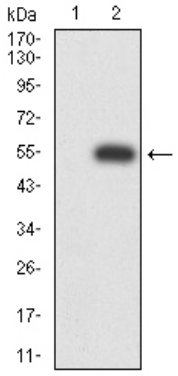
Images



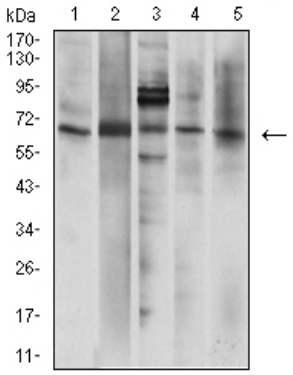
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



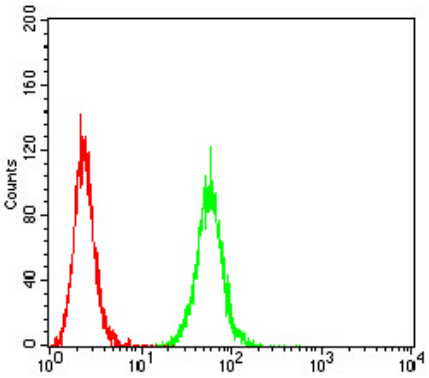
Western blot analysis using P2RX7 mAb against human P2RX7 (AA: 226-452) recombinant protein. (Expected MW is 48.9 kDa)



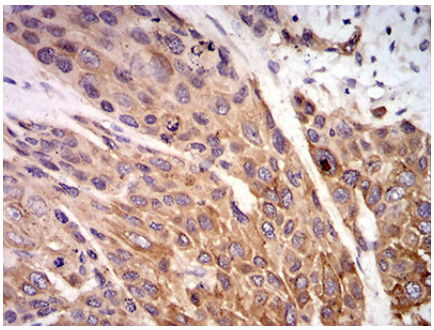
Western blot analysis using P2RX7 mAb against HEK293 (1) and P2RX7 (AA: 226-452)-hIgGFc transfected HEK293 (2) cell lysate.



Western blot analysis using P2RX7 mouse mAb against A431 (1), U251 (2), Hela (3), U937 (4), and HepG2 (5) cell lysate.



Flow cytometric analysis of Hela cells using P2RX7 mouse mAb (green) and negative control (red).



Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using P2RX7 mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.