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Anti-P2RX7 Antibody

Catalog # AP95985

Product Information

Application	WB, IHC, FC
Primary Accession	Q99572
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	68585

Additional Information

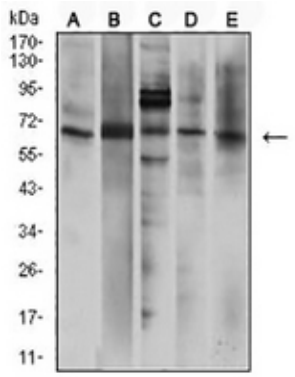
Gene ID	5027
Other Names	P2X purinoceptor 7; P2X7; ATP receptor; P2Z receptor; PurinergIC, receptor
Target/Specificity	Recombinant fusion protein of human P2RX7 expressed in E. Coli
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~FC (1/100 - 1/200)
Format	Mouse IgG2b. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

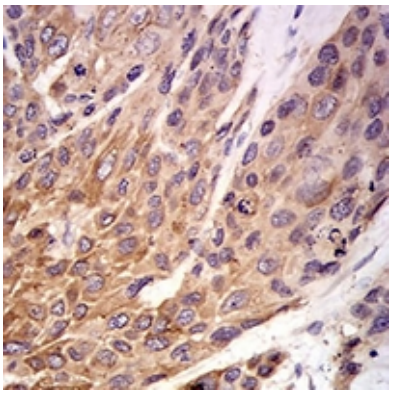
Name	P2RX7
Function	ATP-gated nonselective transmembrane cation channel that requires high millimolar concentrations of ATP for activation (PubMed:17483156, PubMed:25281740, PubMed:9038151). Upon ATP binding, it rapidly opens to allow the influx of small cations Na(+) and Ca(2+), and the K(+) efflux (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.

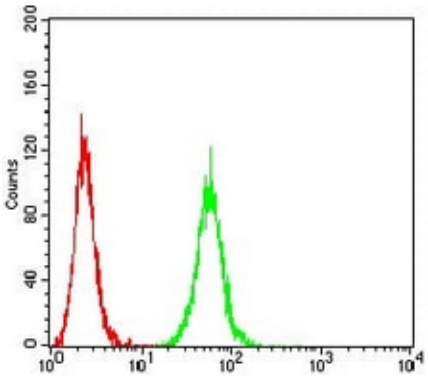
Images



Western blot analysis of P2RX7 expression in A431 (A), U251 (B), Hela (C), U937 (D), HepG2 (E) whole cell lysates. (Predicted band size: 69 kD; Observed band size: 69 kD)



Immunohistochemical analysis of P2RX7 staining in human esophageal cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Flow cytometric analysis of HeLa cells using Anti-P2RX7 Antibody (green) and negative control (red).

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