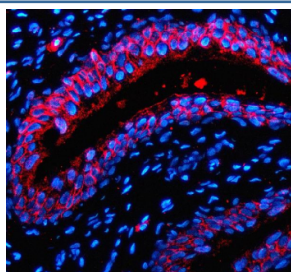


## P2RX1 Antibody / P2X purinoceptor 1 (FY12300)

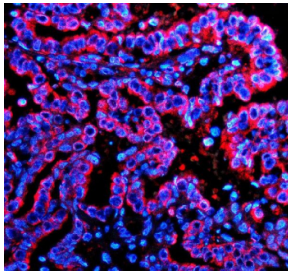
| Catalog No. | Formulation                                                              | Size   |
|-------------|--------------------------------------------------------------------------|--------|
| FY12300     | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

[Bulk quote request](#)

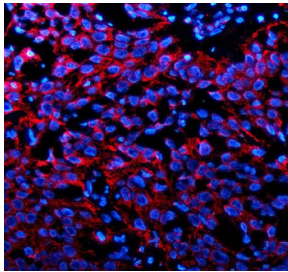
|                    |                                                                                                                                                        |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Availability       | 1-2 days                                                                                                                                               |
| Species Reactivity | Human, Rat                                                                                                                                             |
| Format             | Lyophilized                                                                                                                                            |
| Clonality          | Polyclonal (rabbit origin)                                                                                                                             |
| Isotype            | Rabbit IgG                                                                                                                                             |
| Purity             | Immunogen affinity purified                                                                                                                            |
| Buffer             | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .                                                              |
| UniProt            | P51575                                                                                                                                                 |
| Localization       | Cytoplasm (ER)                                                                                                                                         |
| Applications       | Western Blot : 0.25-0.5ug/ml<br>Immunofluorescence : 5ug/ml<br>Immunocytochemistry/Immunofluorescence : 5ug/ml<br>Flow Cytometry : 1-3ug/million cells |
| Limitations        | This P2RX1 antibody is available for research use only.                                                                                                |



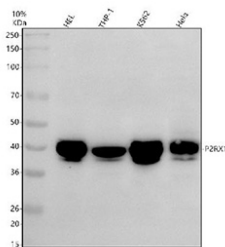
Immunofluorescent staining of P2RX1 using anti-P2RX1 antibody (red). P2RX1 was detected in a paraffin-embedded section of rat bladder tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-P2RX1 antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



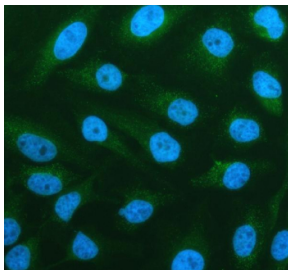
Immunofluorescent staining of P2RX1 using anti-P2RX1 antibody (red). P2RX1 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-P2RX1 antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



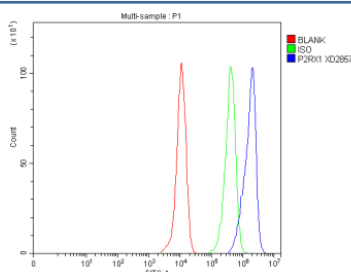
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Western blot analysis of P2RX1 using anti-P2RX1 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HEL whole cell lysates, Lane 2: human THP-1 whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 4: human Hela whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-P2RX1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. Expected molecular weight of P2RX1 ~45 kDa (399 aa). Observed banding in line with a faster-than-predicted migration of the full-length receptor and/or a truncated/processed variant.



Immunofluorescent staining of P2RX1 using anti-P2RX1 antibody (green). P2RX1 was detected in an immunocytochemical section of HELA cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-P2RX1 antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of THP-1 cells using anti-P2RX1 antibody. Overlay histogram showing THP-1 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-P2RX1 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

## Description

P2RX1 antibody detects P2X purinoceptor 1, encoded by the P2RX1 gene on chromosome 17p13.2. P2RX1 antibody is widely used in neurobiology, immunology, and cardiovascular research. P2X1 is a ligand-gated ion channel activated by extracellular ATP, mediating rapid influx of cations including sodium, potassium, and calcium. It plays essential roles in

neurotransmission, platelet activation, and smooth muscle contraction.

Structurally, P2X1 is a ~45 kDa trimeric protein with two transmembrane domains, a large extracellular ligand-binding loop, and intracellular N- and C-terminal regions. ATP binding induces conformational changes that open the channel pore. P2X1 is expressed in platelets, neurons, smooth muscle, and immune cells, reflecting its diverse functions.

Functionally, P2X1 mediates fast excitatory responses in neurons, regulates platelet aggregation, and contributes to vasoconstriction in vascular smooth muscle. It also influences immune cell activation and inflammation. Researchers use P2RX1 antibody to study purinergic signaling, hemostasis, and neuroimmune interactions.

Clinically, P2RX1 has been implicated in thrombosis, hypertension, and fertility. Knockout studies in mice demonstrate roles in male fertility due to defective vas deferens contraction. P2X1 antagonists are under investigation as antithrombotic agents. NSJ Bioreagents provides P2RX1 antibody for research in purinergic signaling, cardiovascular biology, and platelet physiology.

Experimentally, P2RX1 antibody is applied in western blotting to detect the ~45 kDa channel, in immunofluorescence to study membrane localization, and in immunohistochemistry to assess tissue distribution. Functional studies with P2RX1 antibody support analysis of ATP-gated ion channel activity.

## Application Notes

Optimal dilution of the P2RX1 antibody should be determined by the researcher.

## Immunogen

A synthetic peptide corresponding to a sequence in the middle region of human P2RX1 was used as the immunogen for the P2RX1 antibody.

## Storage

After reconstitution, the P2RX1 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.