

# P2Y2 (H-70): sc-20124

## BACKGROUND

Nucleotides are emerging as important extracellular signaling molecules that mediate several effects, such as proliferation, differentiation, chemotaxis and cytokine release. The P2 receptor family is activated by the binding of nucleotides and is divided into two subfamilies, P2X and P2Y. The P2X receptor family is comprised of ligand-gated ion channels that allow for the increased permeability of calcium into the cell in response to extracellular ATP. The P2Y receptor family are G protein-coupled receptors which mediate the effects of extracellular nucleotides, primarily through the activation of phospholipase C. To some extent, the P2Y receptors can also activate potassium channels or, alternatively, inhibit adenylate cyclase and N-type calcium channels in response to extracellular nucleotides. The P2Y receptors are differentially expressed in several tissue types, such as heart, lung and brain. However, all P2Y receptors are expressed in leukocytes, which suggests a role for the P2Y receptor family in the activation of leukocytes and platelets in response to inflammation or vascular damage.

## REFERENCES

1. Akbar, G.K., et al. 1996. Molecular cloning of a novel P2 purinoceptor from human erythroleukemia cells. *J. Biol. Chem.* 271: 18363-18367.
2. North, R.A., et al. 1997. Nucleotide receptors. *Curr. Opin. Neurobiol.* 7: 346-357.

## CHROMOSOMAL LOCATION

Genetic locus: P2RY2 (human) mapping to 11q13.4; P2ry2 (mouse) mapping to 7 E3.

## SOURCE

P2Y2 (H-70) is a rabbit polyclonal antibody raised against amino acids 308-370 mapping at the C-terminus of P2Y2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

P2Y2 (H-70) is recommended for detection of P2Y2 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for P2Y2 siRNA (h): sc-42579, P2Y2 siRNA (m): sc-42580, P2Y2 shRNA Plasmid (h): sc-42579-SH, P2Y2 shRNA Plasmid (m): sc-42580-SH, P2Y2 shRNA (h) Lentiviral Particles: sc-42579-V and P2Y2 shRNA (m) Lentiviral Particles: sc-42580-V.

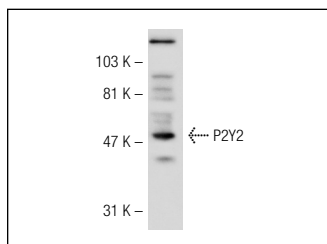
Molecular Weight of P2Y2: 42 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182.

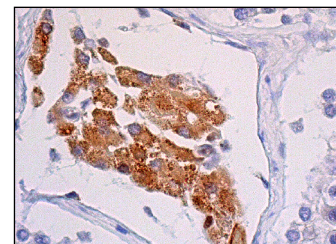
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



P2Y2 (H-70): sc-20124. Western blot analysis of P2Y2 expression in AML-193 whole cell lysate.



P2Y2 (H-70): sc-20124. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of Leydig cells.

## SELECT PRODUCT CITATIONS

1. D'Souza, D.K. 2008. Pharmacological and molecular characterisation of P2Y receptors in endothelial and epithelial cells. University of Wolverhampton. World Wide Web URL: <http://wlv.openrepository.com/wlv/handle/2436/20512>.
2. Raqeeb, A., et al. 2011. Purinergic P2Y2 receptors mediate rapid Ca<sup>2+</sup> mobilization, membrane hyperpolarization and nitric oxide production in human vascular endothelial cells. *Cell Calcium* 49: 240-248.
3. Li, N., et al. 2014. Inhibition of G protein-coupled P2Y2 receptor induced analgesia in a rat model of trigeminal neuropathic pain. *Mol. Pain* 10: 21.
4. Li, W.H., et al. 2015. P2Y2 receptor and EGFR cooperate to promote prostate cancer cell invasion via ERK1/2 pathway. *PLoS ONE* 10: e0133165.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.