

P2Y2 (E-3): sc-518019

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.
3. Burnstock, G. 2000. P2X receptors in sensory neurones. *Br. J. Anaesth.* 84: 476-488.
4. Oury, C., et al. 2000. A natural dominant negative P2X1 receptor due to deletion of a single amino acid residue. *J. Biol. Chem.* 275: 22611-22614.

CHROMOSOMAL LOCATION

Genetic locus: P2RY2 (human) mapping to 11q13.4.

SOURCE

P2Y2 (E-3) is a mouse monoclonal antibody raised against amino acids 308-370 mapping at the C-terminus of P2Y2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

P2Y2 (E-3) is available conjugated to agarose (sc-518019 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518019 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518019 PE), fluorescein (sc-518019 FITC), Alexa Fluor® 488 (sc-518019 AF488), Alexa Fluor® 546 (sc-518019 AF546), Alexa Fluor® 594 (sc-518019 AF594) or Alexa Fluor® 647 (sc-518019 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518019 AF680) or Alexa Fluor® 790 (sc-518019 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

RESEARCH USE

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

APPLICATIONS

P2Y2 (E-3) is recommended for detection of P2Y2 of human origin by Western Blotting (starting dilution 1:100, 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) 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 shRNA Plasmid (h): sc-42579-SH and P2Y2 shRNA (h) Lentiviral Particles: sc-42579-V.

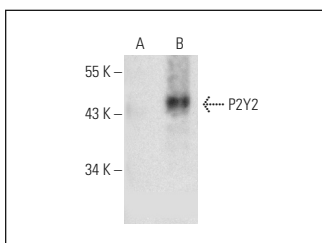
Molecular Weight of P2Y2: 42 kDa.

Positive Controls: human P2Y2 transfected HEK293T whole cell lysate or HEK293 whole cell lysate: sc-45136.

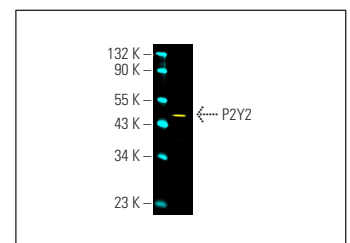
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



P2Y2 (E-3): sc-518019. Western blot analysis of P2Y2 expression in non-transfected (A) and human transfected (B) HEK293T whole cell lysates.



P2Y2 (E-3) Alexa Fluor® 488: sc-518019 AF488. Direct fluorescent western blot analysis of P2Y2 expression in HEK293 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 647: sc-516791.

SELECT PRODUCT CITATIONS

1. Kim, G.T., et al. 2019. PLAG enhances macrophage mobility for efferocytosis of apoptotic neutrophils via membrane redistribution of P2Y2. *FEBS J.* 286: 5016-5029.
2. Bekeschus, S., et al. 2020. Gas plasma-treated prostate cancer cells augment myeloid cell activity and cytotoxicity. *Antioxidants* 9: 323.

STORAGE

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