



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

Anti- Purinergic Receptor P2Y₁₃

produced in rabbit, affinity isolated antibody

Catalog Number **P0120**

Product Description

Anti-Purinergic Receptor P2Y₁₃ (P2Y purinoceptor 13; G-protein coupled receptor 86) is produced in rabbit using as immunogen the peptide DRFLKIIRPLRNIFLK(C) corresponding to residues 119-134 of human P2Y₁₃. The antibody is affinity purified on immobilized antigen.

Anti-Purinergic Receptor P2Y₁₃ cross-reacts with rat (Gene P2ry13 ID: 310444), 10/16 residues identical. Homology with mouse (Gene P2ry13, ID: 74191) shows 11 out of 16 residues are identical. The antibody has been used in immunoblotting applications.

The P2Y family belongs to the G-protein coupled receptors superfamily. They are activated by extracellular nucleotides and modulate a variety of physiological functions. A new member of this family was recently identified, the P2Y₁₃ receptor.^{1,2} The P2Y₁₃ receptor has significant similarity to the P2Y₁₂ receptor (about 45% sequence identity) and together they form a distinct group structurally different from other members of this family. P2Y₁₃ receptor, like the P2Y₁₂ receptor, is a high affinity receptor for the ADP nucleotide, coupled to the G_{αi} class of G-proteins.¹ The P2Y₁₃ receptor is highly expressed at brain and spleen tissues as well as in the immune system. Lower expression was demonstrated in the testis, lung liver and other peripheral organs. It has been shown that ADP activates a negative feedback pathway for ATP release from human red blood cells via the P2Y₁₃ receptor.⁴ P2Y₁₃ receptor was also implicated in inhibition of N-type Ca²⁺ channels in neurons, exerting pre- and/or post-synaptic modulatory action.⁵

Reagent

Supplied as a lyophilized powder from phosphate buffered saline, pH 7.4, containing 1% BSA and 0.05% sodium azide.

Reconstitution

Reconstitute the lyophilized powder with 50 μL or 200 μL deionized water, depending on package size. Further dilutions should be made using a carrier protein such as BSA (1-3%). The antibody concentration after reconstitution is 1 mg/mL.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

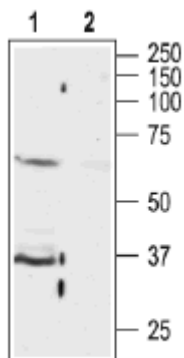
Lyophilized powder can be stored intact at room temperature for several weeks. For extended storage, it should be stored at -20 °C or below. The reconstituted solution can be stored at 2-8 °C for up to 2 weeks. For longer storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. Centrifuge before use. Working dilution samples should be discarded if not used within 12 hours. The antibody is stable for at least 12 months when stored appropriately.

Product Profile

Immunoblotting: a recommended working dilution of 1:200 was determined using rat brain membranes

Immunohistochemistry was performed with rat testis paraffin sections.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.



Immunoblot

Lane 1 Anti- P2Y₁₃ antibody, 1:200

Lane 2 Anti- P2Y₁₃ antibody, preincubated with the control peptide antigen.

References

1. Communi, D. *et al. J. Biol. Chem.* **276**, 41479 (2001).
2. Zhang, F.L. *et al. J. Pharmacol. Exp. Ther.* **301**, 705 (2002).
3. IUPHAR/GPCR/ReceptorFamilies Web site at <http://iuphar-db.org/GPCR/ReceptorFamiliesForward>
4. Wang, L. *et al. Circ. Res.* **96**, 189 (2005).
5. Wirkner, K. *et al. Br. J. Pharmacol.* **141**, 141 (2004).

AH,PHC 04/07-1