SANTA CRUZ BIOTECHNOLOGY, INC.

P2Y6 (1-70): sc-4522 WB



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 consists of eleven members of G-protein coupled receptors, P2Y1, P2Y2, P2Y3, P2Y4, P2Y5, P2Y6, P2Y7, P2Y8, P2Y9, P2Y10 and P2Y11, 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

- Akbar, G.K., Dasari, V.R., Webb, T.E., Ayyanathan, K., Pillarisetti, K., Sandhu, A.K., Athwal, R.S., Daniel, J.L., Ashby, B., Barnard, E.A., and Kunapuli, S.P. 1996. Molecular cloning of a novel P2 purinoceptor from human erythroleukemia cells. J. Biol. Chem. 271: 18363-18367.
- North, R.A. and Barnard, E.A. 1997. Nucleotide receptors. Curr. Opin. Neurobiol. 7: 346-357.
- Burnstock, G. 2000. P2X receptors in sensory neurones. Br. J. Anaesth. 84: 476-488.
- Oury, C., Toth-Zsamboki, E., Van Geet, C., Thys, C., Wei, L., Nilius, B., Vermylen, J., and Hoylaerts, M.F. 2000. A natural dominant negative P2X1 receptor due to deletion of a single amino acid residue. J. Biol. Chem. 275: 22611-22614.
- Ding, S. and Sachs, F. 2000. Inactivation of P2X2 purinoceptors by divalent cations. J. Physiol. 2: 199-214.
- 6 Adrian, K., Bernhard, M.K., Breitinger, H.G., and Ogilvie, A. 2000. Expression of purinergic receptors (ionotropic P2X1-7 and metabotropic P2Y1-11) during myeloid differentiation of HL60 cells. Biochim. Biophys. Acta. 1492: 127-138.
- Di Virgilio, F., Chiozzi, P., Ferrari, D., Falzoni, S., Sanz, J. M., Morelli, A., Torboli, M., Bolognesi, G., and Baricordi, O.R. 2001. Nucleotide receptors: an emerging family of regulatory molecules in blood cells. Blood 97: 587-600.

SOURCE

P2Y6 (1-70) is expressed in *E. coli* as a 35 kDa tagged fusion protein corresponding to amino acids 1-70 of P2Y6 of human origin.

PRODUCT

P2Y6 (1-70) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 μg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

P2Y6 (1-70) is suitable as a Western blotting control for sc-15215 and sc-20127.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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