

MULTISCREEN™ STABLE CELL LINE RAT RECOMBINANT P2Y2 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: Cr1161-3

Lot Number: Cr1161-3-110613

Quantity: 1 vial (2×10^6) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: 1321N1

Transfection: Expression vector containing full-length rat P2Y2 cDNA (GenBank Accession Number NM_017255.1) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM, 10% FBS, 1 μ g/mL puromycin

Stability: In progress

Background: The P2Y2 receptor was the first of this family of receptors that can be fully activated by both ATP and UTP. P2Y2 receptors are present on all of the body's mucosal surfaces, including the lungs, eyes, upper airways, mouth, vaginal tract and gastrointestinal tract. P2Y2 receptors have also been found on non-mucosal surfaces, such as the retinal pigment epithelium. Activation of P2Y2 has been shown to stimulate mucosal hydration and mucociliary clearance in the lungs and upper airways and induce secretion of therapeutically significant amounts of fluid and tear components to the ocular surface. Thus, P2Y2 receptors are therapeutic targets for treating serious disorders including cystic fibrosis, a fatal genetic disease, retinal detachment as well as dry eye disease.

Application: Functional assays

Figure 1

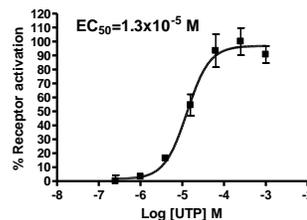


Figure 2

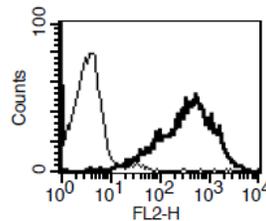


Figure 1. Dose-dependent stimulation of intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Kellerman *et al.* (2002) Inhaled P2Y2 receptor agonists as a treatment for patients with Cystic Fibrosis lung disease. *Adv Drug Deliv Rev* 54:1463-1474.

Shaver (2001) P2Y receptors: biological advances and therapeutic opportunities. *Curr Opin Drug Discov Devel* 4(5): 665-70.

Sromek and Harden (1998) Agonist-induced internalization of the P2Y2 receptor. *Mol Pharmacol* 54:485-494.

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