

## MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT P2Y2 RECEPTOR

### Data sheet

#### PRODUCT INFORMATION

**Catalog Number:** C1161-3

**Lot Number:** C1161-3-020909

**Quantity:** 1 vial ( $2 \times 10^6$ ) frozen cells

**Freeze Medium:** Sigma Freezing Medium (C-6164)

**Host cell:** 1321N1

**Transfection:** Expression vector containing full-length human P2Y2 cDNA (GenBank Accession Number NM\_002564) with FLAG tag sequence at N-terminus

**Recommended Storage:** Liquid nitrogen upon receiving

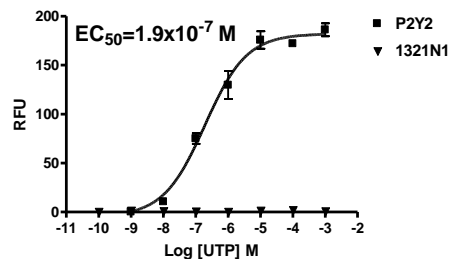
**Propagation Medium:** DMEM, 10% FBS, 1  $\mu$ g/mL puromycin

**Stability:** Stable after minimum of two months continuous growth

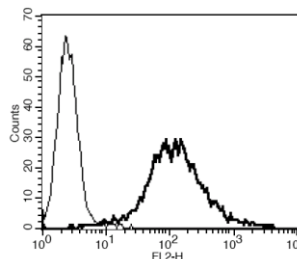
**Background:** The P2Y2 receptor was the first of this family of receptors that can be fully activated by both ATP and UTP. P2Y2 receptors are present on all of the body's mucosal surfaces, including the lungs, eyes, upper airways, mouth, vaginal tract and gastrointestinal tract. P2Y2 receptors have 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 calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

**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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