

Human Purinergic Receptor P2Y12 (P2RY12) Stable Cell Line

CATALOG NUMBER: CL-03-P2RY12

Introduction

This receptor functions as a receptor for extracellular ATP and ADP. In platelets binding to ADP leads to mobilization of intracellular calcium ions via activation of phospholipase C, a change in platelet shape, and probably to platelet aggregation.

Description

Human Purinergic Receptor P2Y12 (P2RY12) is a HEK293 cell line that expresses recombinant human P2RY12 receptor.

Parental Cells

HEK293-CNG cells (originally developed by BD Biosciences by introducing CNG in HEK-293 cells) (Cat# CL-03-PC20)

Gene/Enzyme Introduced

P2RY12 (Genbank Locus ID 64805; NCBI protein database NP_073625.1)

Applications

cAMP assay for Gi-coupled human purinergic receptor P2Y12 (P2RY12)

Functional Tests

- this cell line has been tested positive for P2RY12 receptor specific response
- surviving rate: more than 2.5 million/vial on the second day after thawing
- the receptor specific activity is stable for 10 weeks continuous passage

Mycoplasma Contamination Test

This lot of cells have been tested and found to be free of mycoplasma contamination.

Content

- Stable P2RY12 receptor cells: 1 mL (1×10^6 cells/mL)

Growth Properties

Adherent

Cell Culture Medium

- Growth medium: 90%DMEM, 10% FBS, 250 µg/ml G418 and 1 µg/ml puromycin
- Freezing medium: 10% DMSO, 90% growth medium

Storage

Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below -130°C, preferably in liquid nitrogen vapor, until ready for use.



DATA EXAMPLE

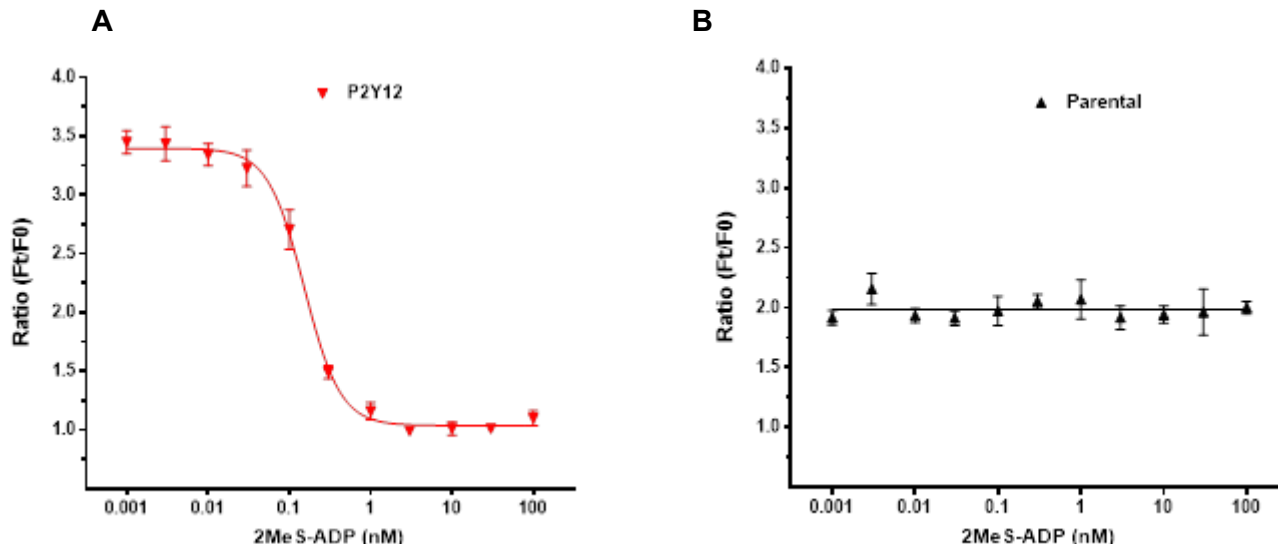


Figure 1. Response of ACTOne P2RY12 cell line & parental cell line to 2MeS-ADP

ACTOne P2RY12 cells and parental cells (CB-80200-200) were plated overnight in 20 μ l culture medium on a 384-well black/clear plate. The next day, cells were dye-loaded with 20 μ l/well of 1X Dye-loading solution (ACTOne Membrane Potential Assay Kit). After 2 hours of incubation at room temperature, two readings were obtained prior to and 15 min after the addition of 2MeS-ADP. Ratios of the two readings (F/F0) are plotted in the figure.

- A. Dose response curve of 2MeS-ADP in ACTOne P2RY12 cell line. EC50 = 0.15 nM in the presence of PDE inhibitor Ro20-1724 and β -adrenoceptor agonist isoproterenol.**
- B. The parental cells do not respond to 2MeS-ADP.**

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