

Human Purinergic Receptor P2Y1 (P2RY1) Stable Cell Line

CATALOG NUMBER: CL-03-P2RY1

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 P2Y1 (P2RY1) is a HEK293 cell line that expresses recombinant human P2RY1 receptor.

Parental Cells

HEK-293 cells

Gene/Enzyme Introduced

P2RY1 (Genbank Locus ID 5028; NCBI protein database NP_002554.1)

Applications

Calcium influx assay for Gq-coupled human Purinergic receptor P2Y1 (P2RY1)

Functional Tests

- this cell line has been tested positive for P2RY1 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 P2RY1 receptor cells: 1 mL (1 x 10⁶ cells/mL)

Growth Properties

Adherent

Cell Culture Medium

- Growth medium: 90%DMEM, 10% FBS, 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

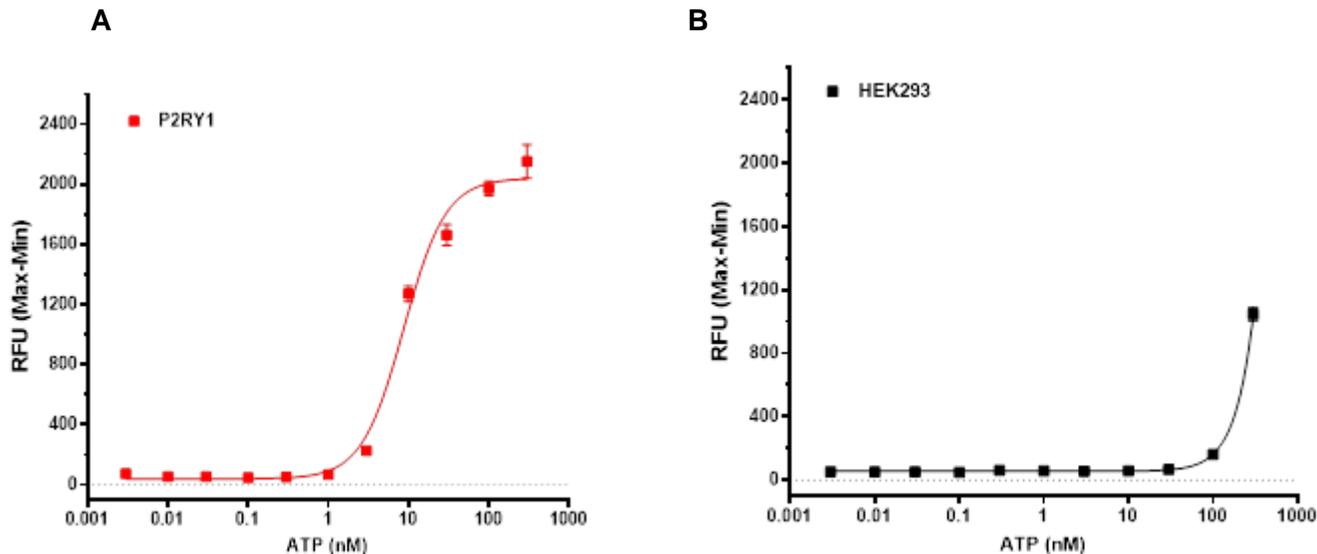


Figure 1. Purinergic receptor P2Y1 (P2RY1) cell line to ATP

P2RY1 cells and parental cells (HEK293) were plated overnight in 20 μ l culture medium on a 384-well plate black/clear plate. The next day, the cells were loaded with equal volume of eEnzyme non-wash calcium dye ([CAT# CA-C155](#)) and incubated at a 37°C incubator for 60 min. The plate was taken out and kept at room temperature for another 30 min. The assay was performed on FDSS 7000 with online addition of different concentrations of agonist.

A. Dose response curve of ATP in HEK293-P2RY1 cell line. EC50 = 8.7 nM

B. Parental cells respond to ATP at much higher concentration

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