

Human fMet-Leu-Phe Receptor Stable Cell Line

CATALOG NUMBER: CL-11-FPR1R

Description

Human fMet-Leu-Phe receptor cell line is a HEK293-CNG cell line that expresses recombinant human FPR1 receptor. HEK293-CNG cells express a modified CNG (Cyclic Nucleotide Gated) channel that opens in response to elevated intracellular cAMP levels and consequently result in ion flux and cell membrane depolarization which can be easily measured with fluorescent Membrane Potential Dye (Cat# CA-M165). The assay allows both end-point and kinetic measurement of intracellular cAMP changes with a FDSS, FLIPR, or a fluorescence microplate reader.

Parental Cells

HEK-293 CNG cells (originally developed by BD Biosciences by introducing CNG in HEK-293 cells)

Gene/Enzyme Introduced

Human fMet-Leu-Phe receptor (NCBI protein database NP_002020.1)

Applications

- cAMP assay for Gi-coupled human fMet-Leu-Phe receptor (FPR1R)

Mycoplasma Contamination Test

This cell line has been tested negative for *Mycoplasma sp.*

Content

- Stable FPR1 receptor cells: 1 mL (1 x 10⁶ cells/mL before freezing)

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% FBS

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

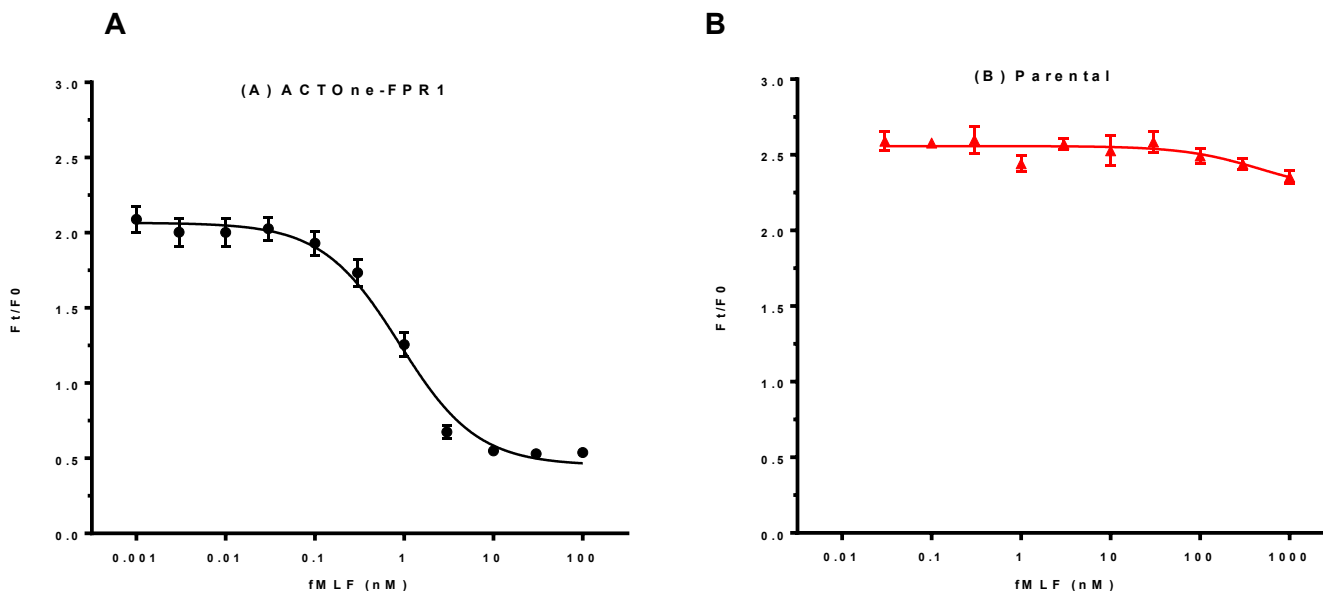


Figure 1. Dose response curve of dopamine in ACTOne FPR1 cell line.

ACTOne FPR1 and parental cells were plated overnight in 20 μ l culture medium on a BD Biocoat 384 well plate. The next day, cells were dye-loaded with 20 μ l/well of 1X Dye-loading solution (Membrane Potential Assay Kit, Catalog# CA-M165). After 2 hours of incubation at room temperature, two readings were obtained prior to and 25 min after the addition of dopamine. Ratios of the two readings (F/F0) are plotted in the figure.

- A. Dose response curve of fMLF in ACTOne FPR1 cell line. EC50 = 0.89 nM in the presence of 25 μ M of PDE inhibitor Ro20-1724 and 300 nM of β -adrenoceptor agonist isoproterenol.**
- B. Parental cells do not respond to fMLF**

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