

Human Luteinizing Hormone/Choriogonadotropin Receptor (LHCGR) ACTOne[™] Stable Cell Line

CATALOG NUMBER: CL-01-LHCGR

Description

Human LHCGR ACTOne[™] is a HEK-293 CNG cell line that expresses recombinant human LHCGR. HEK-293 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 (often detectable by calcium-responsive dye, Cat# CA-C155) and cell membrane depolarization which can be easily measured with fluorescent Membrane Potential Dye (Cat# <u>CA-M165</u>). The assay allows both end-point and kinetic measurement of intracellular cAMP changes with a FLIPR, or a fluorescence microplate reader. It is a simple homogenous assay involving only dye and compound addition steps, allowing easy implementation in a high-throughput environment.



Parental Cells

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

Gene/Enzyme Introduced

LHCGR

Applications

- cAMP assay for Gs-coupled human luteinizing hormone/choriogonadotropin receptor.
- cell based high-throughput screening of human LHCGR inhibitors

Please consider the environment before printing

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Mycoplasma Contamination Test

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

Content

• Stable cells: 1 mL (1 x 10⁶ cells/mL in 70% DMEM, 20% FBS, 10% DMSO)

Growth Properties

Adherent

Cell Culture Medium

- Growth medium: DMEM-10% FBS supplemented with 250 µg/ml G418, 1 µg/ml Puromycin
- Freezing medium: 10% DMSO, 90% FBS

Data Analysis



Figure 1. Response of ACTOne[™] LHCGR cell line & parental cell line to hCG.

ACTOne[™] LHCGR cells were plated overnight in 20 µl culture medium on a 384 well BD Biocoat plate. The next day, cells were dye-loaded with 20 µl/well of 1x Dye-loading solution (membrane potential dye kit, Cat# CA-M165). After 2 hours of incubation at room temperature, two readings were obtained prior to and 30 min after the addition of hCG. Ratios of the two readings (F/F0) are plotted in the figure.

A. Dose response curve of hCG in ACTOne[™] LHCGR cell line. EC50 = 855 pM in the presence of PDE inhibitor Ro 20-1724.

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