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FOXP3 Luciferase Reporter-Jurkat Cell Line

Catalog number: RC1044

This package insert must be read in its entirety before using this product.
For research use only. Not for use in diagnostic procedures.

FOXP3 Luciferase Reporter-Jurkat Cell Line

Catalog Number: RC1044, **Storage:** Immediately upon receipt, store in liquid nitrogen. (Ship on dry ice.)
Contents: Each vial contains 2 ~ 3 x 10^6 cells in 1 ml of 90% FBS + 10% DMSO.
Description: The FOXP3 Luciferase Reporter cell line is a stably transfected Jurkat T cell line which expresses Renilla luciferase reporter gene

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under the transcriptional control of the Forkhead box P3 (FOXP3) promoter. As a member of the forkhead transcription factor family, FOXP3 is a key transcription factor that functions in the development and function of regulatory T cells. Functional activity of the cell line has been validated by phorbol 12-myristate 13-acetate (PMA) in the presence of ionomycin (Figure 1).

Applications: Functional Assay

Application Notes: Functional Assay, detecting the transcriptional activity of FOXP3

Application Details:

Application:

Monitor the FOXP3 induction activity.Screen for activators or inhibitors of FOXP3 indction.

Culture conditions:

Cells should be grown at 37°C with 5% CO2 using RPMI medium supplemented with 10% FBS, 1 mM sodium pyruvate, 10 mM HEPES and 1% Pen/Strep plus 3 µg/ml of Puromycin. It is recommended to quickly thaw the frozen cells upon receipt or from liquid nitrogen in a 37°C water-bath, transfer to a tube containing 10 ml of growth medium without Puromycin, spin down cells, resuspend cells in pre-warmed growth medium without Puromycin, transfer resuspended cells to T25 flask and culture in 37°C-CO2 incubator. Monitor the cell viability by counting cells daily for 1~3 days until cells completely recover viability as cells are doubling daily. Once cells are over 90% confluent, harvest cells by centrifugation and passage cells. At first passage, switch to growth medium containing Puromycin. Cells should be split before they reach complete confluence. To passage the cells, transfer cells to a tube, spin down cells, resuspend cells and seed appropriate aliquots of cell suspension into new culture vessels. Subcultivation ration = 1:10 to 1:20 weekly.

Functional validation:

A. Response of FOXP3 Jurkat T cells to phorbol 12-myristate 13-acetate (PMA)/ Ionomycin.1. Harvest FOXP3 Jurkat T cells and seed cells into a white solid-bottom 96-well microplate in 100 µl of growth medium at 2.5 x 10^5 cells/well.

FOXP3 Luciferase Reporter-Jurkat Cell Line (RC1044) Images

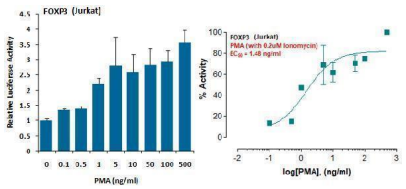


Fig-1: Induction of NF-kB activity by PMA in FOXP3 Jurkat T cells.

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