



ATF6 Luciferase Reporter-HeLa Cell Line

Catalog number: RC1038

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

ATF6 Luciferase Reporter-HeLa Cell Line

Catalog Number: RC1038, **Storage:** Immediately upon receipt, store in liquid nitrogen. (Ship on dry ice.)

Contents: Each vial contains $2 \sim 3 \times 10^6$ cells in 1 ml of 90% FBS + 10% DMSO.

Description: The ATF6 Luciferase Reporter cell line is a stably transfected HeLa cell line which expresses Renilla luciferase reporter gene under the transcriptional control of the activating transcription factor 6 (ATF6)-response element. ATF6 is a member of the basic-leucine zipper transcription factor family, which is located in the endoplasmic reticulum (ER) membranes and plays a central role in transcriptional activation of ER molecules.

The ATF6 induction by Tunicamycin is shown in Figure 1.

Applications: Functional Assay

Application Notes: Functional Assay, detecting the transcriptional activity of ATF6

Application Details:

Application:

Monitor ATF6 transcriptional activity. Screen for activators or inhibitors of the ATF6 signaling pathway.

Culture conditions:

Cells should be grown at 37°C with 5% CO₂ using DMEM medium supplemented with 10% FBS 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. Leave the T25 flask in the incubator for 1~3 days without disturbing or changing the medium until cells completely recover viability and become adherent. Once cells are over 90% adherent, remove growth medium and passage the cells through trypsinization and centrifugation. At first passage, switch to growth medium containing Puromycin. Cells should be split before they reach complete confluence. To passage the cells, detach cells from culture vessel with Trypsin/EDTA, add complete growth medium and transfer to a tube, spin down cells, resuspend cells and seed appropriate aliquots of cells suspension into new culture vessels. Subcultivation ration = 1:10 to 1:20 weekly.

Functional validation:

A. Response of ATF6 HeLa cells to Tunicamycin 1. Harvest ATF6 HeLa cells and seed cells into a white solid-bottom 96-well microplate in 100 µl of growth medium at 5×10^4 cells/well. 2. Incubate cells at 37°C in a CO₂ incubator for overnight. 3. The next day, stimulate cells with different concentrations of Tunicamycin. 4. Incubate at 37°C in a CO₂ incubator for 6-16 hours. 5. Add 50 µl of luciferase assay reagent per well. 6. Incubate at room temperature for 1-5 minutes and measure luminescence using a microplate luminometer.

ATF6 Luciferase Reporter-HeLa Cell Line (RC1038) Images

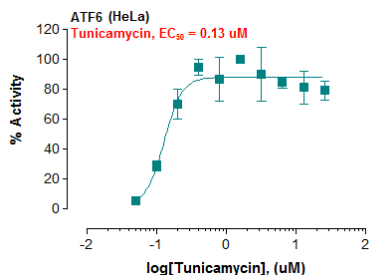


Fig-1: Induction of ATF6 activity by Tunicamycin in ATF6 HeLa cells.

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