BOSTER BIOLOGICAL TECHNOLOGY
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# SRE Luciferase Reporter-HEK293 Cell Line

**Catalog number: RC1032**

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

## SRE Luciferase Reporter-HEK293 Cell Line

**Catalog Number:** RC1032, **Storage:** Immediately upon receipt, store in liquid nitrogen. (Ship on dry ice.)

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**Contents:** Each vial contains 2 ~ 3 x 10^6 cells in 1 ml of 90% FBS + 10% DMSO.
**Description:** The SRE Luciferase Reporter cell line is a stably transfected HEK 293 cell line which expresses Renilla luciferase reporter gene under the transcriptional control of the serum response element (SRE). The SRE reporter cell line is designed to monitor MAPK/ERK activity and can be used for studying GPCR-linked MAPK/ERK signaling pathways as well as screening of agonists, antagonists or signaling inhibitors related with the MAPK/ERK signaling pathways. Functional activity of the cell line has been validated by serum stimulation assay (Figure 1).
**Applications:** Functional Assay
**Application Notes:** Functional Assay, detecting the transcriptional activity of SRE
**Application Details:**

## Application:

Monitor the GPCR-linked MAPK/ERK signaling pathway. Screen for activators or inhibitors of the GPCR-linked MAPK/ERK 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 2~4 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 SRE HEK293 cells to fetal bovine serum (FBS). 1. Harvest SRE HEK293 cells and seed cells into a white solid-bottom 96-well microplate at 5 x 10^4 cells/well in 100 µl of growth medium containing 0.5% FBS to start serum starvation. 2. Incubate cells at 37°C in a CO2 incubator for overnight. 3. The next day, stimulate cells with 40% FBS or 40% FBS plus phorbol 12-myristate 13-acetate (PMA). 4. Incubate at 37°C in a CO2 incubator for 6-16 hours.

## SRE Luciferase Reporter-HEK293 Cell Line (RC1032) Images

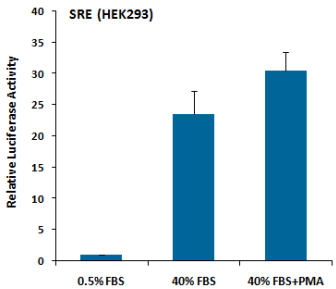


Fig-1: Induction of SRE activity by FBS or FBS plus PMA in SRE HEK293 cells.

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