BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

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antibody and ELISA experts

MRE Luciferase Reporter HEK293 Cell Line

Catalog number: RC1037

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

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Catalog Number: RC1037, **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 MRE Luciferase Reporter cell line is a stably transfected HEK 293 cell line which expresses Renilla luciferase reporter gene under the transcriptional control of the metal response element (MRE). MRE is targeted by MRE-binding transcription factor-1 (MTF-1) which is a zinc finger transcription factor and plays a major role in induction of metallothionein gene expression in response to cellular stress caused by heavy metals such as zinc and cadmium. The MRE induction by ZnSO4 is shown in Figure 1.
Applications: Functional Assay
Application Notes: Functional Assay, detecting the transcriptional activity of MRE
Application Details: Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.
If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.
Some PubMed article(s) citing the expression level of this target are as follows:
Boster Bio's internal QC testing used:

Application:

Monitor MTF-1 transcriptional activity. Screen for activators or inhibitors of the MTF-1 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 MRE HEK293 cells to zinc sulfate (ZnSO4) 1. Harvest MRE HEK293 cells and seed cells into a white solid-bottom 96-well microplate in 100 µl of growth medium at 5 x 104 cells/well. 2. Incubate cells at 37°C in a CO2 incubator for overnight. 3. The next day, stimulate cells with different concentrations of ZnSO4. 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.

MRE Luciferase Reporter HEK293 Cell Line (RC1037) Images

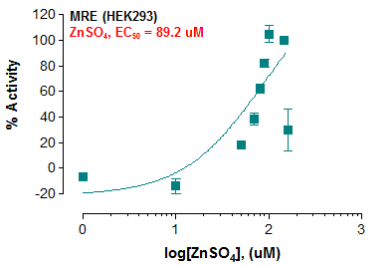

Fig-1: Induction of MRE activity by zinc sulfate in MRE HEK293 cells.

Submit a product review to Biocompare.com

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