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

TNF-alpha Luciferase Reporter-RAW264.7 Cell Line

Catalog number: RC1006

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

TNF-alpha Luciferase Reporter-RAW264.7 Cell Line

Catalog Number: RC1006, **Storage:** Immediately upon receipt, store in liquid nitrogen. (Ship on dry ice.)

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

Contents: Each vial contains 2 ~ 3 x 10^6 cells in 1 ml of 90% FBS + 10% DMSO.
Description: The TNF-alpha Luciferase Reporter cell line is a stably transfected RAW264.7 cell line which expresses Renilla luciferase reporter gene under the transcriptional control of the TNF-alpha promoter. Tumor necrosis factor-alpha (TNF-alpha) is one of the major proinflammatory cytokines and can induce systemic inflammation, apoptotic cell death, sepsis and cachexia. Dysregulation of TNF-alpha induction is often involved in various human diseases including inflammatory bowel disease, cancer and Alzheimer's disease. The TNF-alpha induction by lipopolysaccharide (LPS), the Toll-like receptor 4 (TLR4) ligand, is shown in Figure 1.
Applications: Functional Assay
Application Notes: Functional Assay, detecting the transcriptional activity of TNF-alpha
Application Details:

Application:

Monitor the TNF-alpha induction activity. Screen for activators or inhibitors of the TNF-alpha 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 1~2 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 TNF-alpha RAW264.7 cells to lipopolysaccharide (LPS).1. Harvest TNF-alpha – RAW264.7 cells and seed cells into a white solid-bottom 96-well microplate in 100 µl of growth medium at 8.5 x 10^4 cells/well. 2. Incubate cells at 37°C in a CO2 incubator for overnight. 3. The next day, stimulate cells with various concentrations of LPS. 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.

TNF-alpha Luciferase Reporter-RAW264.7 Cell Line (RC1006) Images

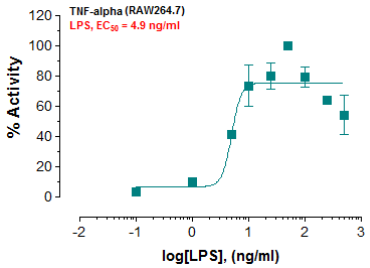

Fig-1: Induction of TNF-alpha promoter activity by LPS in TNF-alpha RAW264.7 cells.

Submit a product review to Biocompare.com

Submit a review of this product to Biocompare.com to receive a $20 Amazon giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.

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

TNF-alpha Luciferase Reporter-RAW264.7 Cell Line

For Research Use Only. Not for use in diagnostic procedures.