THP-1 NF-κB-Luc2

TIB-202-NFkB-LUC2™

Description

THP-1 NF-κB-Luc2 is a monocyte cell isolated from the peripheral blood of a patient with acute monocytic leukemia. The cells can be used in vitro bioluminescence assays to study signaling pathways, development of new drugs, and safety evaluation of new chemicals and drugs.

For-profit customers intending to use this product for non-commercial screening must include the one-time "ATCC Screening Fee" (ATCC® ACS-2103F) with their first purchase of this product.

Organism: *Homo sapiens*, human
Tissue: Peripheral blood
Age: 1 year
Gender: Male
Morphology: monocyte
Growth properties: Suspension
Disease: Acute monocytic leukemia
Cells per vial: 6.0 to 8.0 x 10^6
Volume: 1.0 mL

Storage Conditions

Product format: Frozen
Storage conditions: Vapor phase of liquid nitrogen

Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

BSL 2

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Temperature: 37°C
Atmosphere: 95% Air, 5% CO_2

Handling Procedures

Unpacking and storage instructions:

1. Check all containers for leakage or breakage.
2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below -130°C, preferably in liquid nitrogen vapor, until ready for use.

Complete medium:

The base medium for this cell line is ATCC-formulated RPMI-1640 Medium (ATCC 30-2001). To make the complete growth medium, add the following components to the base medium:

- Fetal bovine serum (FBS; ATCC 30-2020) to a final concentration of 10%
- Puromycin to a final concentration of 1 µg/mL (Sigma catalog # P9620 or ThermoFisher Scientific catalog # A1113803)
- 2-Mercaptoethanol to a final concentration of 0.05 mM (ThermoFisher Scientific catalog # 21985023)

Note: Complete culture medium WITHOUT 2-Mercaptoethanol is stable for 4 weeks at 4 to 8C. Do not store media supplemented with 2-Mercaptoethanol

Note: Because of limited stability, the 2-Mercaptoethanol should be added to an aliquot of the above complete culture medium fresh prior to seeding or performing fluid additions. Complete medium with 2-Mercaptoethanol is stable for 7 days in culture. Use 0.9 µL 2-Mercaptoethanol per 1 mL culture medium.

Handling Procedure: To ensure the highest level of viability, thaw the vial and initiate the culture as soon as possible upon receipt. If upon arrival, continued storage of the frozen culture is necessary, it should be stored in liquid nitrogen vapor phase and not at -70°C. Storage at -70°C will result in loss of viability.

1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes).
2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions.
3. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 125 x g for 8 to 12 minutes.

4. Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio) and dispense into a 25 cm^2 or a 75 cm^2 culture flask. It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the complete growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).
5. Incubate the culture at 37°C in a suitable incubator. A 5% CO_2 in air atmosphere is recommended if using the medium described on this product sheet.

Subculturing procedure:

Protocol: Cultures should be maintained by the addition of fresh medium. Note: Full fluid changes should be performed by centrifuging and resuspending the cells in fresh media at least every 7 days. Subsequent resuspension at 2-4 x 10^5 viable cells/mL. Subculture when cell concentration reaches 8x10^5 cells/mL. Do not allow the cell concentration to exceed 1.5 x 10^6 cells/mL. Corning® T-75 flasks (catalog #431464) or equivalent are recommended for subculturing this product.

Medium Renewal: Add fresh medium every 2 to 3 days (depending on cell density).
Reagents for cryopreservation: Complete growth medium supplemented with 5% (v/v) DMSO (ATCC 4-X)

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: THP-1 NF-κB-Luc2 (ATCC TIB-202-NFkB-LUC2)

References

References and other information relating to this material are available at www.atcc.org.

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