Jurkat, Clone E6-1

TIB-152™

Description

Jurkat, Clone E6-1 is a clone of the Jurkat-FHCRC cell line, a derivative of the Jurkat cell line, which was established from the peripheral blood of a 14-year-old, male, acute T-cell leukemia patient. This cell line can be used in immune system disorder research and immunology and immuno-oncology research.

Organism: *Homo sapiens*, human
Cell Type: T lymphoblast
Tissue: Peripheral blood
Gender: Male
Morphology: lymphoblast
Growth properties: Suspension
Disease: acute T cell leukemia

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 1

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 (ATCC 30-2020) to a final concentration of 10%.

Example media preparation:

- 500 mL RPMI-1640 (ATCC 30-2001)
- 56 mL FBS (ATCC 30-2020) – not heat-inactivated

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 150 to 400 x *g* for 8 to 12 minutes (200 x *g* for 8 minutes).
4. Resuspend cell pellet with the recommended complete growth medium (see the lot information on Certificate of Analysis (COA) for the culture recommended dilution ratio) and dispense into a 25 cm^2 or a 75 cm^2 culture flask as recommended on the COA. The recommended seeding density for TIB-152 is 2 x 10^5 to 4.0 x 10^5 viable cells/mL. 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:
Cultures can be maintained by addition or replacement of medium. **Note:** it is best to add media as directed in the Medium renewal section below in order to produce conditioned medium. Only replace medium if needed.

Alternatively, cultures can be established by centrifugation with subsequent resuspension at 1 x 10^5 viable cells/mL.

Note: Centrifuging these cells to subculture/replacing medium is not required for every media renewal. It is always important to perform frequent cell counts, at least twice per week, when culturing suspension cell lines. If the proper cell density is not maintained, then suspension cells will suffer. If the cells become too dense then they can deplete the medium and die, and if they are too sparse, they will enter into a lag phase and grow slowly or die. Cell density cannot be be accurately judged by observation. Cells must be counted.
Do not allow the cell density to exceed 3 X 10^6 cells/mL. Corning® T-75 flasks (catalog #431464) are recommended for subculturing this product.
Interval: Maintain cultures at a cell concentration between 1 x 10^5 and 2 x 10^6 viable cells/mL.
Note: During production, ATCC dilutes cells at the lower end of the recommended concentration during the earlier culturing period.
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: Jurkat, Clone E6-1 (ATCC TIB-152)

References

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

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