



# CCRF-CEM [CCRF CEM]

CRM-CCL-119™

## Description

**Organism:** *Homo sapiens*, human

**Cell Type:** T lymphoblast

**Tissue:** Peripheral blood

**Age:** 4 years

**Morphology:** Lymphoblast (KRAS CRM)

**Growth properties:** Suspension

**Disease:** Acute lymphoblastic leukemia ALL

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## Storage Conditions

**Product format:** Frozen

**Storage conditions:** Vapor phase of liquid nitrogen

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## 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.

Certified Reference Material produced under an ISO 17034 accredited process.

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## Biosafety Level 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.

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## Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at [www.atcc.org](http://www.atcc.org).

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## Growth Conditions

**Temperature:** 37°C

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## 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  $-130^{\circ}\text{C}$ , 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%.

**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  $-70^{\circ}\text{C}$ . Storage at  $-70^{\circ}\text{C}$  will result in loss of viability.

1. Thaw the vial by gentle agitation in a  $37^{\circ}\text{C}$  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. It is recommended that the cryoprotective agent be removed immediately. Centrifuge the cell suspension at approximately  $125 \times g$  for 5 to 10 minutes.
4. Transfer the cell pellet to an appropriate size vessel (see the specific batch information for the culture recommended dilution ratio). 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 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  $37^{\circ}\text{C}$  in a suitable incubator. A 5%  $\text{CO}_2$  in air atmosphere is recommended if using the medium described on this product sheet.

**Subculturing procedure:**

Cultures can be maintained by the addition of fresh medium or replacement of medium. Alternatively, cultures can be established by centrifugation with subsequent resuspension at  $2$  to  $3 \times 10^5$  viable cells/mL. Maintain cell density between  $2$  to  $3 \times 10^5$  and  $1$  to  $2 \times 10^6$  viable cells/mL.

**Medium Renewal:** Add fresh medium (20% to 30% by volume) every 2 to 3 days

**Reagents for cryopreservation:** Complete growth medium 95%; DMSO, 5% (ATCC 4-X)

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## Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: CCRF-CEM [CCRF CEM] (ATCC CRM-CCL-119)

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## References

References and other information relating to this material are available at [www.atcc.org](http://www.atcc.org).

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