



## Product Sheet

# NALM-1 (ATCC® CRL-1567™)

### Please read this FIRST



Storage Temp.  
**liquid nitrogen**  
**vapor phase**

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Biosafety Level  
**1**

### Intended Use

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

### Complete Growth Medium

The base medium for this cell line is ATCC-formulated RPMI-1640 Medium, Catalog No. 30-2001. To make the complete growth medium, add the following components to the base medium: fetal bovine serum to a final concentration of 15%.

### Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: NALM-1 (ATCC® CRL-1567™)

American Type Culture Collection  
PO Box 1549  
Manassas, VA 20108 USA  
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800.638.6597 or 703.365.2700  
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Or contact your local distributor

## Description

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

**Tissue:** peripheral blood

**Disease:** Leukemia

**Cell Type:** lymphoblast

**Age:** 3 years

**Gender:** female

**Morphology:** lymphoblast

**Growth Properties:** suspension

### DNA Profile:

Amelogenin: X

CSF1PO: 10,12

D13S317: 11,12

D16S539: 11,15

D5S818: 11

THO1: 7,9

TPOX: 9,11

vWA: 15,17

**Cytogenetic Analysis:** Contains Philadelphia chromosome (Ph1).

## Batch-Specific Information

Refer to the Certificate of Analysis for batch-specific test results.

## SAFETY PRECAUTION

ATCC highly recommends that protective gloves and clothing always be used and a full face mask always be worn when handling frozen vials. It is important to note that some vials 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 vessel exploding or blowing off its cap with dangerous force creating flying debris.

## Unpacking & 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.

## Handling Procedure for Flask Cultures

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The flask was seeded with cells (see specific batch information), grown, and completely filled with medium at ATCC to prevent loss of cells during shipping.

1. Upon receipt visually examine the culture for macroscopic evidence of any microbial contamination. Using an inverted microscope (preferably equipped with phase-contrast optics), carefully check for any evidence of microbial contamination
2. Incubate the flask in an upright position for several hours at 37°C. After the temperature has equilibrated, aseptically remove the entire contents of the flask and centrifuge at 125 xg for 5 to 10 minutes. Remove shipping medium and save for reuse. Resuspend the cell pellet in 10 ml of this medium.
3. From this cell suspension remove a sample for a cell count and viability. Adjust the cell density of the suspension to 2-3 x 10<sup>5</sup> viable cells/ml in the shipping medium.
4. Incubate the culture, horizontally, at 37°C in a 5% CO<sub>2</sub> in air atmosphere. Maintain the cell density of the culture as suggested under the subculture procedure.

## Subculturing Procedure

**Protocol:** Cultures can be maintained by addition of fresh medium. Alternatively, cultures can be established by centrifugation with subsequent resuspension at 1 x 10<sup>5</sup> viable cells/ml. Maintain cultures at a cell concentration between 1-2 X 10<sup>5</sup> and 1 X 10<sup>6</sup> cells/ml. Do not allow the cell concentration to exceed 1 X 10<sup>6</sup> cells/ml.

## Cryopreservation Medium

### Cryoprotectant Medium



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Complete culture medium described above supplemented with 5% (v/v) DMSO.  
Cell culture tested DMSO is available as ATCC Catalog No. 4-X.

### Comments

A permanent hematopoietic cell line, designated NALM-1, was established from the peripheral blood of a patient who was in blastic crisis of Ph1-positive chronic myelocytic leukemia. By means of a panel of specific xenoantisera, the NALM-1 cells were found to express a specific antigen of acute lymphoblastic leukemia and blast leukemia-associated antigen. The cells exhibited no cell-surface receptors for sheep erythrocytes, IgG, or complement; neither cell-surface immunoglobulins nor cytoplasmic immunoglobulin were observed. Furthermore, normal T-cell or B-cell antigens, detectable by the antisera used in this study, were not found in the NALM-1 line.

### References

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

### Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes for Health.

### ATCC Warranty

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### Disclaimers

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Additional information on this culture is available on the ATCC web site at [www.atcc.org](http://www.atcc.org).  
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