




## Product Sheet


# NCEB-1 (ATCC® CRL-3005™)

### Please read this FIRST



Storage Temp.  
**Liquid nitrogen  
vapor phase**

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Biosafety Level  
**2**

### 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 20%.

### Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: NCEB-1 (ATCC® CRL-3005™)

American Type Culture Collection  
PO Box 1549  
Manassas, VA 20108 USA  
[www.atcc.org](http://www.atcc.org)

800.638.6597 or 703.365.2700  
Fax: 703.365.2750  
Email: [Tech@atcc.org](mailto:Tech@atcc.org)

Or contact your local distributor

## Description

**Organism:** *Homo sapiens*; *Mus musculus*, human; mouse

**Tissue:** peripheral blood

**Disease:** lymphoma

**Cell Type:** lymphoblast; immortalized with Epstein-Barr virus (EBV); Epstein-Barr virus (EBV) transforme

**Age:** 57 year old ( human)

**Morphology:** lymphoblast

**Growth Properties:** suspension

### DNA Profile:

Amelogenin: X

CSF1PO: 12,13

D13S317: 12

D16S539: 9,10

D5S818: 9,11

D7S820: 10,11

THO1: 6,9,3

TPOX: 11

vWA: 14,18

**Cytogenetic Analysis:** This is a near tetraploid human/mouse hybrid cell line with a modal chromosome number of 94 and a low polyploidy rate. Most of the derivative chromosomes described in the original cell line, including the t(11;14)(q13;q32) marker are still present. **All of the examined cells of this cell line contain several intact mouse chromosomes.**

## 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 Frozen Cells

### Handling Procedure for Frozen Cells

To insure 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.

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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 centrifuge at approximately 125 x g for 5 to 7 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<sup>2</sup> or a 75 cm<sup>2</sup>



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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<sub>2</sub> in air atmosphere is recommended if using the medium described on this product.



### Handling Procedure for Flask Cultures

#### Handling Procedure for Flask Cultures

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 x g 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 1 x 10<sup>5</sup> to 2 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 the addition of fresh medium. Alternatively, cultures can be established by centrifugation with subsequent resuspension at 1 X 10<sup>4</sup> to 2 X 10<sup>4</sup> viable cells/ml. Do not allow the cell concentration to exceed 1.2 X 10<sup>6</sup> cells/ml.

**Medium renewal:** Add fresh medium every 2 to 3 days (depending on cell density)



### Cryopreservation Medium

#### Cryoprotectant Medium

FBS, 60%; RPMI-1640 Medium, 30%; DMSO, 10%

Cell culture tested DMSO is available as ATCC® Catalog No. 4-X.



### Comments

NCEB-1 was established by Epstein-Barr virus (EBV) transformation of peripheral blood mononuclear cells from a patient with centroblastic-centrocytic diffuse lymphoma expressing IgM lambda. Cytogenetic analysis of the cell line demonstrated two clones with variations: a hypodiploid clone, with a complex karyotype including a t(11;14)(q13;q32) similar to the original tumor cells, and a near tetraploid clone with the same markers. The cell line was not tumorigenic when tested in an in vitro assay using immunosuppressed mice. [PubMed: 2848599]. It was reported in 2006 that surprisingly, NCEB-1 carried several stable mouse chromosomes and showed expression of both human and murine bcl-2 protein. [PubMed: 16448697]. ATCC cautions scientist on the use of the NCEB-1 cell line as an in vitro model for the study of Mantle Cell Lymphoma. Published data from researchers and testing performed during the ATCC accessioning process have confirmed that this cell line is a human-mouse hybrid. This finding at ATCC is based on karyotyping analysis (G-banding).



### References

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



### Biosafety Level: 2

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

This product is intended for laboratory research purposes only. It is not intended for use in humans.

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Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at [www.atcc.org](http://www.atcc.org)

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

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