Please read this FIRST

Storage Temp.
liquid nitrogen
vapor phase

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 Leibovitz’s L-15 Medium, Catalog No. 30-2008. To make the complete growth medium, add the following components to the base medium:

- fetal bovine serum to a final concentration of 5%
- 0.01 mg/ml transferrin (final conc.)
- 0.01 mg/ml insulin (final conc.)
- 5 µg/ml (55 U/ml) catalase (final conc.)
- 3.6 µg/ml (0.01 mM) hydrocortisone (final conc.)
- 70 µg/ml (0.5mM) o-phosphoethanolamine (final conc.)
- 10 ng/ml human recombinant epidermal growth factor (EGF) (final conc.)
- 3 ng/ml (0.01 µM) estradiol (final conc.)
- 0.8 ng/ml (1 µM) Na-L-thyroxine (final conc.)
- 23 µg/ml (0.2mM) proline (final conc.)
- extra 2 mM glutamine

Note: Do not filter complete medium.

L-15 Medium is formulated for use in a free gas exchange with atmospheric air. A CO₂ and air mixture may be detrimental to cells when using this medium for cultivation.

Citation of Strain

American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org
800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

Or contact your local distributor

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

Note: These cells are cultured on collagen I coated vessels. Please see Subculturing Procedure for details.

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 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. It is recommended that the cryoprotective agent be removed immediately. Centrifuge the cell suspension at approximately 125 x g for 5 to 10 minutes. Discard the supernatant and resuspend the cell pellet in an appropriate amount of fresh growth medium.
4. Transfer the cell pellet to an appropriate size vessel. 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°C in a suitable incubator. A 100% air atmosphere is recommended if using the medium described on this product sheet. Note: This cell line grows slowly.

Handling Procedure for Flask Cultures

Note: These cells are cultured on collagen I coated vessels. Please see Subculturing Procedure for details.
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. Also check to determine if the majority of cells are still attached to the bottom of the flask; during shipping the cultures are sometimes handled roughly and many of the cells often detach and become suspended in the culture medium (but are still viable).

2. If the cells are still attached, aseptically remove all but 5 to 10 mL of the shipping medium. The shipping medium can be saved for reuse. Incubate the cells at 37°C in a 100% air atmosphere until they are ready to be subcultured.

3. If the cells are not attached, aseptically remove the entire contents of the flask and centrifuge at 125 x g for 5 to 10 minutes. Remove shipping medium and save. Resuspend the pelleted cells in 10 mL of this medium and add to 25 cm² flask. Incubate at 37°C in a 100% air atmosphere until cells are ready to be subcultured.

### Subculturing Procedure

These cells are cultured on collagen I coated vessels. Add 5 µg per cm² collagen I (BD Biosciences, Cat. No.354236 or equivalent) to culture vessels and incubate at room temperature for 1 hour. Remove collagen solution and rinse vessels 3 times with a balanced salt solution. Vessels may be used immediately or air dried and stored at 2-8°C for up to one week under sterile conditions. Alternatively, commercially available pre-coated Collagen I vessels, such as BD BioCoat Cellware (BD Biosciences, Cat. No. 356524 for 75 cm² flask) or equivalent, may be used.

Volumes used in this protocol are for 75 cm² flasks; proportionally reduce or increase amount of solutions for culture vessels of other sizes.

1. Remove and discard culture medium.
2. Briefly rinse the cell layer with Ca⁺⁺/Mg⁺⁺ free Dulbecco’s phosphate-buffered saline (DPBS) or 0.25% (w/v) Trypsin - 0.53 mM EDTA solution to remove all traces of serum which contains trypsin inhibitor.
3. Add 2.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes).
4. Briefly rinse the cell layer with Ca⁺⁺/Mg⁺⁺ free Dulbecco’s phosphate-buffered saline (DPBS) or 0.25% (w/v) Trypsin - 0.53 mM EDTA solution to remove all traces of serum which contains trypsin inhibitor.
5. Transfer cell suspension to a centrifuge tube and spin at approximately 125 x g for 5 to 10 minutes.
6. Resuspend the cell pellet in fresh growth medium. Add appropriate aliquots of the cell suspension to new collagen I coated culture vessels. An inoculum of 3 X 10⁴ to 4 X 10⁴ viable cells/cm² is recommended.
7. Incubate cultures at 37.0°C.

Subculture when cultures reach a cell concentration between 7 X 10⁴ to 1 X 10⁵

**Subcultivation ratio**: 1:2 is recommended.

**Medium renewal**: every 2 to 3 days

**Note**: This cell line grows slowly.

### Cryopreservation Medium

Complete growth medium, 80%; FBS, 10%; DMSO, 10% Cell culture tested DMSO is available as ATCC Catalog No. 4-X.

### Comments

This cell line expresses receptor HER-2/neu.

### References

References and other information relating to this product are available online at 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.
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Additional information on this culture is available on the ATCC web site at www.atcc.org.

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