ATCC

Product Sheet

alpha TC1 clone 6 (ATCC® CRL-2934™)

Please read this FIRST

Storage Temp.
liquid nitrogen vapor phase

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 Dulbecco's Modified Eagle's Medium (Invitrogen Cat. No. 31600-034). To make the complete growth medium, add the following components to the base medium:

- heat-inactivated fetal bovine serum (FBS) to a final concentration of 10%
- 15 mM HEPES
- 0.1 mM non-essential amino acids
- 0.02% bovine serum albumin
- 1.5 g/L sodium bicarbonate
- 2.0 g/L glucose

Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: alpha TC1 clone 6 (ATCC® CRL-2934™)

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

Description

Organism: *Mus musculus*, mouse
Tissue: pancreas, alpha cells
Disease: adenoma
Cell Type: alpha cells
Morphology: epithelial
Growth Properties: adherent, with loosely attached clusters and some single cells in suspension

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

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.

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 125 x g for 5 to 10 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^2 or a 75 cm^2 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_2 in air atmosphere is recommended if using the medium described on this product.

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. 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 5% CO_2 in 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 cm^2 flask. Incubate at 37°C in a 5% CO_2 in air atmosphere until cells are ready to be subcultured.

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Subculturing Procedure

Volumes used in this protocol are for 75 cm^2 flasks; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes.

NOTE: Warm all solutions to 37.0°C prior to use

1. Transfer all medium and floating cells from flask to a 50 mL centrifuge tube.
2. Adherent cells are removed using Cell Dissociation Buffer (an enzyme free buffer; Invitrogen, Catalog No. 13150-016) diluted 1:5 with Hanks' Balanced Salt Solution. Add 5.0 mL of diluted cell dissociation buffer per 75 cm^2 flask and gently rock flask to bathe the cells at room temperature for 1 to 2 minutes.
3. Allow the flask to remain at room temperature for 1 to 5 additional minutes until cells have detached from the flask.
4. Firmly tap the flask against palm of hand to dislodge cells.
5. Add 10.0 mL of fresh medium per 75 cm^2 flask and triturate up and down directing the stream along the growth surface of the flask to dislodge the cells and break up some of the clumps.
6. Transfer these cells to the centrifuge tube from Step 1. Centrifuge at 125 x g for 5 to 10 minutes. Remove medium and resuspend pellet in fresh complete medium.
7. Add appropriate aliquots of cell suspension to new culture vessels.
8. Incubate cultures at 37°C.

Subcultivation ratio: A subcultivation ratio of 1:3 to 1:4 is recommended.
Medium renewal: Every 2 to 3 days.

Cryopreservation Medium

Complete growth medium, 55%; heat-inactivated fetal bovine serum, 40%; DMSO, 5%.
Cell culture tested DMSO is available as ATCC Catalog No. 4-X.

Comments

The parental cell line is less differentiated and produces both glucagon and insulin. Two clonal cell lines, alpha TC1 clone 6 and alpha TC1 clone 9 (ATCC CRL-2350), are more differentiated than the parent line and produce only glucagon ref. alpha TC1 clone 6 cells exhibit the most differentiated phenotype and express the highest levels of glucagon. ref

References

References and other information relating to this product are available online at 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

The viability of ATCC® products is warranted for 30 days from the date of shipment, and is valid only if the product is stored and cultured according to the information included on this product information sheet. ATCC lists the media formulation that has been found to be effective for this strain. While other, unspecified media may also produce satisfactory results, a change in media or the absence of an additive from the ATCC recommended media may affect recovery, growth and/or function of this strain. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans.
While ATCC uses reasonable efforts to include accurate and up-to-date information on this product sheet, ATCC makes no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. ATCC does not warrant that such information has been confirmed to be accurate.
This product is sent with the condition that you are responsible for its safe storage, handling, and use. ATCC is not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort

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is made to insure authenticity and reliability of strains on deposit, ATCC is not liable for damages arising from the misidentification or misrepresentation of cultures.
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

Additional information on this culture is available on the ATCC web site at www.atcc.org.
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