



NIT-1

CRL-2055™

Description

NIT-1 is a beta cell line that was isolated from the islet of Langerhans of a 10-week-old, female mouse with insulinoma. This cell line was deposited by EH Leiter.

Organism: *Mus musculus*, transgenic for SV40 large T antigen, mouse, transgenic for SV40 large T antigen

Cell Type: beta cell

Tissue: Pancreas; Islet of Langerhans

Age: 10 weeks

Gender: Female

Morphology: epithelial

Growth properties: Adherent

Disease: Insulinoma

Storage Conditions

Product format: Frozen

Storage conditions: Vapor phase of liquid nitrogen

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.

BSL 2

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*

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(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.

Cells contain polyomaviral DNA sequences

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.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Temperature: 37°C

Atmosphere: 95% Air, 5% CO₂

Handling Procedures

Unpacking and storage instructions:

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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.

Complete medium: Ham's F12K medium with 2 mM L-glutamine adjusted to contain 1.5 g/L sodium bicarbonate, 90%; heat-inactivated dialyzed fetal bovine serum, 10%.

Handling Procedure:

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 $125 \times g$ 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^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 sheet.

Subculturing procedure:

Subcultures are prepared using a cell dissociation buffer (an enzyme free Hanks' based solution; Catalog number: 13150-016 available from GIBCO).

Remove the medium from the culture flask, add 2 mL of cell dissociation buffer per 25 cm^2 flask (5 mL per 75 cm^2 flask and gently rock the flask at room temperature for 1 to 2 minutes to bathe the cells in the buffer.

Aspirate the solution and discard. Allow the flask to sit at room temperature for 3 to 4 additional minutes (total time from initial addition of cell dissociation buffer is approximately 5 minutes).

Firmly tap the flask against the palm of the hand to dislodge cells.

Add 5 mL of fresh medium per 25 cm² flask (10 mL per 75 cm² flask) and triturate up and down directing the stream along the bottom of the flask to dislodge the cells and break up some of the clumps.

Add fresh medium, aspirate and dispense into new flasks.

Subcultivation Ratio: A subcultivation ratio of 1:2 to 1:3 is recommended

Medium Renewal: 1 to 2 times per week

Reagents for cryopreservation: Complete growth medium supplemented with 5% (v/v) DMSO (ATCC 4-X)

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: NIT-1 (ATCC CRL-2055)

References

References and other information relating to this material are available at www.atcc.org.

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