



# 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*

## NIT-1

CRL-2055

(*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](http://www.atcc.org).

---

### Growth Conditions

**Temperature:** 37°C

**Atmosphere:** 95% Air, 5% CO<sub>2</sub>

---

### Handling Procedures

**Unpacking and storage instructions:**

**NIT-1****CRL-2055**

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  $-130^{\circ}\text{C}$ , 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  $-70^{\circ}\text{C}$ .

Storage at  $-70^{\circ}\text{C}$  will result in loss of viability.

1. Thaw the vial by gentle agitation in a  $37^{\circ}\text{C}$  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  $25 \text{ cm}^2$  or a  $75 \text{ cm}^2$  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  $37^{\circ}\text{C}$  in a suitable incubator. A 5%  $\text{CO}_2$  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  $25 \text{ cm}^2$  flask (5 mL per  $75 \text{ cm}^2$  flask and gently rock the flask at room temperature for 1 to 2 minutes to bathe the cells in the buffer.

## NIT-1

CRL-2055

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 cm<sup>2</sup> flask (10 mL per 75 cm<sup>2</sup> 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](http://www.atcc.org).

---

### Warranty

The product is provided 'AS IS' and the viability of ATCC<sup>®</sup> products is warranted for 30 days from the date of shipment, provided that the customer has stored and handled the product according to the information included on the product information sheet, website, and Certificate of Analysis. For living cultures, ATCC lists the media formulation and reagents that have been found to be effective for the product. While other unspecified media and reagents may also produce satisfactory results, a change in the ATCC and/or depositor-recommended protocols may affect the

## NIT-1

### CRL-2055

recovery, growth, and/or function of the product. If an alternative medium formulation or reagent is used, the ATCC warranty for viability is no longer valid. Except as expressly set forth herein, no other warranties of any kind are provided, express or implied, including, but not limited to, any implied warranties of merchantability, fitness for a particular purpose, manufacture according to cGMP standards, typicality, safety, accuracy, and/or noninfringement.

---

## Disclaimers

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. Any proposed commercial use is prohibited without a license from ATCC.

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 or complete and the customer bears the sole responsibility of confirming the accuracy and completeness of any such information.

This product is sent on the condition that the customer is responsible for and assumes all risk and responsibility in connection with the receipt, handling, storage, disposal, and use of the ATCC product including without limitation taking all appropriate safety and handling precautions to minimize health or environmental risk. As a condition of receiving the material, the customer agrees that any activity undertaken with the ATCC product and any progeny or modifications will be conducted in compliance with all applicable laws, regulations, and guidelines. This product is provided 'AS IS' with no representations or warranties whatsoever except as expressly set forth herein and in no event shall ATCC, its parents, subsidiaries, directors, officers, agents, employees, assigns, successors, and affiliates be liable for indirect, special, incidental, or consequential damages of any kind in connection with or arising out of the customer's use of the product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, ATCC is not liable for damages arising from the misidentification or misrepresentation of such materials.

## NIT-1

CRL-2055

Please see the material transfer agreement (MTA) for further details regarding the use of this product. The MTA is available at [www.atcc.org](http://www.atcc.org).

---

### Copyright and Trademark Information

© ATCC 2023. All rights reserved.

ATCC is a registered trademark of the American Type Culture Collection.

---

### Revision

This information on this document was last updated on 2023-02-25

---

### Contact Information

ATCC

10801 University Boulevard

Manassas, VA 20110-2209

USA

US telephone: 800-638-6597

Worldwide telephone: +1-703-365-2700

Email: [tech@atcc.org](mailto:tech@atcc.org) or contact your local distributor

---