NK-92® MI

CRL-2408™

Description

NK-92® MI are natural killer cells that are cytotoxic to a wide range of malignant cells; it kills both K562 cells and Daudi cells in chromium release assays. This cell line was derived from peripheral blood mononuclear cells from a 50-year-old, White male with rapidly progressive non-Hodgkin's lymphoma. Use this cell line in your immunology and cancer research.

Organism: *Homo sapiens*, human
Cell Type: natural killer cell; nk cell
Tissue: Peripheral blood
Age: 50 years
Gender: Male
Morphology: lymphoblast
Growth properties: Suspension, multicellular aggregates
Disease: Lymphoma; Malignant Non-Hodgkin's

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 (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.

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% CO_2

Handling Procedures

Unpacking and 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.

Complete medium:

The complete medium for this cell line is MyeloCult™ H5100 (StemCell Technologies cat # 05150)

Note: The cell line CRL-2408 does not require hydrocortisone. Do not add hydrocortisone to the complete medium

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. Withdraw the cells from the ampoule and transfer thawed cells to empty 15 mL centrifuge tube. Add 9-11 mL 4°C culture medium slowly to the cell suspension.
4. Centrifuge the cell suspension at approximately 175 x g for 10 minutes at 4°C. Discard the supernatant.
5. Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio) and dispense into a new 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).
6. 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:

Cultures can be maintained by centrifuging cells and resuspending cell pellet in fresh medium at 2 - 3 x 10^5 viable cells/mL. Centrifugation and full replacement of culture medium may be performed for the first subcultures. Cultures can then be maintained by addition of fresh medium. These cells tend to grow in aggregates that may lose viability when they are dispersed. Accurate counts and viabilities may not be possible.

Maintain cell density between 2 x 10^5 and 1 x 10^6 viable cells/mL or use a 1:3 spilt ratio.

Reagents for cryopreservation: CryoStor® CS10 (StemCell Technologies at # 07930)

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: NK-92® MI (ATCC CRL-2408)

References

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

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