ATCC

Product Sheet

# Kasumi-3 (ATCC® CRL-2725™)

**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 RPMI-1640 Medium, Catalog No. 30-2001. To make the complete growth medium, add the following components to the base medium: fetal bovine serum to a final concentration of 20%.

## Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: Kasumi-3 (ATCC® CRL-2725™)

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:** *Homo sapiens*, human
**Tissue:** peripheral blood
**Disease:** acute myeloblastic leukemia
**Cell Type:** lymphoblast
**Age:** 57 years
**Gender:** male
**Morphology:** myeloblast
**Growth Properties:** suspension
**DNA Profile:**
Amelogenin: X,Y
CSF1PO: 11
D13S317: 11,12
D16S539: 9,11
D5S818: 12
D7S820: 10,11
THO1: 6,9
TPOX: 8
vWA: 16,18
**Cytogenetic Analysis:** t(3:7) (q27;q22), del(5)(q15), del(9)(q32), add(12)(p11)

## 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 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.

## 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.

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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
2. Incubate the flask in an upright position for several hours at 37°C. After the temperature has equilibrated, aseptically remove the entire contents of the flask and centrifuge at 125 x g for 5 to 10 minutes. Remove shipping medium and save for reuse. Resuspend the cell pellet in 10 mL of this medium.
3. From this cell suspension remove a sample for a cell count and viability. Adjust the cell density of the suspension to 2-5 x $10^5$ viable cells/mL in the shipping medium.
4. Incubate the culture, horizontally, at 37°C in a 5% $CO_2$ in air atmosphere. Maintain the cell density of the culture as suggested under the subculture procedure.

## Subculturing Procedure

Cultures can be maintained by the addition of fresh medium or replacement of medium. Alternatively, cultures can be established by centrifugation with subsequent resuspension at 3 x $10^5$ viable cells/mL.

**Interval:** Maintain cell density between 3 x $10^5$ and 3 x $10^6$ viable cells/mL.
**Medium Renewal:** Add fresh medium every 2 to 3 days (depending on cell density)

## Cryopreservation Medium

Complete culture medium described above supplemented with 5% (v/v) DMSO.
Cell culture tested DMSO is available as ATCC Catalog No. 4-X.

## Comments

The cell line expresses CD7, CD4, CD13, CD33, CD34, HLA-DR and c-Kit on cell surface compatible with that of acute myelocytic leukemia, subtype M0 (AML-M0).
Kasumi-3 has t(3;7)(q27:q22), del(5)(q15), del(9)(q32), and add(12)(p11) chromosomal abnormalities. The breakpoint of 3q27 is located near the EVI1 gene.
A high level of expression of the EVI1 gene was observed.
Kasumi-3 cells treated with TPA showed maturation to monocytic lineage.
Treatment with either interleukin (IL)-2, IL-3, IL-4, granulocyte-macrophage colony-stimulating factor (GMCSF) or stem cell factor induced the proliferation, characteristic of undifferentiated leukemia.

## 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 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.

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