Product Sheet
M059J (ATCC® CRL-2366™)

Please read this FIRST

Storage Temp.
liquid nitrogen vapor temperature

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

These cells are grown in a medium containing a 1:1 mixture of Dulbecco's Modified Eagle's Medium and Ham's F12 medium with 2.5 mM L-glutamine adjusted to contain 15 mM HEPES, 0.5 mM sodium pyruvate, and 1.2 g/L sodium bicarbonate supplemented with 0.05 mM non-essential amino acids and 10% fetal bovine serum.

DNA Profile:
- Amelogenin: X,Y
- CSF1PO: 10,12
- D1S806: 14
- D1S160: 11,12
- D1S818: 11,12
- D7S820: 10,12
- D8S1176: 11,12
- D16S539: 10,12
- vWA: 8
- THO1: 9.3
- TPOX: 8
- D5S818: 11,12
- D13S317: 14
- CSF1PO: 10,12
- D19S433: 11,12
- D1S160: 11,12
- TFX1: 9.3
- Amelogenin: X,Y

Cytogenetic Analysis: aneuploid; Y chromosome is present

Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: M059J (ATCC® CRL-2366™)

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.

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. 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 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.
**Subculturing Procedure**

Volumes used in this protocol are for 75 cm² flask; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes.

1. Remove and discard culture medium.
2. Briefly rinse the cell layer with 0.25% (w/v) Trypsin-0.53 mM EDTA solution to remove all traces of serum that contains trypsin inhibitor.
3. Add 2.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes).
   **Note:** To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal.
4. Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting.
5. Add appropriate aliquots of the cell suspension to new culture vessels.
6. Incubate cultures at 37°C

**Subculture Ratio:** 1:6 to 1:8

**Medium Renewal:** Every 2 to 3 days.

**Note:** For more information on enzymatic dissociation and subculturing of cell lines consult Chapter 10 in *Culture of Animal Cells, a manual of Basic Technique* by R. Ian Freshney, 3rd edition, published by Alan R. Liss, N.Y., 1994.

**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**

M059J cells lack DNA-dependent protein kinase activity, while M059K cells express normal levels of DNA-dependent protein kinase.

M059J cells are approximately 30-fold more sensitive to ionizing radiation than M059K cells.

M059J cells are more sensitive than M059K cells to the cytotoxic effects of bleomycin, N,N-bis(2-choroethyl)-N-nitrosourea and nitrogen mustard.

M059J cells are deficient in repair of DNA double strand breaks.

The cells are negative for glial fibrillary acidic protein (GFAP).

**References**

References and other information relating to this product are available online at [www.atcc.org](http://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**

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

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