Product Sheet

U-87 MG (ATCC® HTB-14™)

Please read this FIRST

Biosafety Level

1

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1

Organism: Homo sapiens, human
Tissue: brain
Disease: classified as grade IV as of 2007, glioblastoma; astrocytoma
Age: 44 years
Gender: male
Morphology: epithelial
Growth Properties: adherent
Isoenzymes:
- AK-1, 1
- ES-D, 1
- G6PD, B
- GLO-I, 1
- Me-2, 1
- PGM1, 2
- PGM3, 1
DNA Profile:
- Amelogenin: X
- CSF1PO: 10,11
- D13S317: 8,11
- D7S820: 8,9
- D5S818: 11,12
- D16S539: 12
- vWA: 15,17
- THO1: 9.3
- TPOX: 8

Cytogenetic Analysis:
This is a hypodiploid human cell line with the modal chromosome number of 44 occurring in 48% of cells. The rate of higher ploidy was 5.9%. Twelve markers were common to all cells, including der(1)t(1;3) (p22;q21), der(16)t(1;16) (p22;p12), del(9) (p13) and nine others. The marker der(1) had two copies in most cells. There was only one copy of normal X. N1, N6 and N9 were not found.

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 Flask Cultures

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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.

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. Also check to determine if the majority of cells are still attached to the bottom of the flask; during shipping the cultures are sometimes handled roughly and many of the cells often detach and become suspended in the culture medium (but are still viable).
2. If the cells are still attached, aseptically remove all but 5 to 10 mL of the shipping medium. The shipping medium can be saved for reuse. Incubate the cells at 37°C in a 5% CO₂ in air atmosphere until they are ready to be subcultured.
3. If the cells are not attached, aseptically remove the entire contents of the flask and centrifuge at 125
**Biosafety Level: 1**

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: U-87 MG (ATCC® HTB-14™)

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**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 Eagle's Minimum Essential Medium, Catalog No. 30-2003. To make the complete growth medium, add the following components to the base medium: fetal bovine serum to a final concentration of 10%.

**Citation of Strain**

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**Subculturing Procedure**

**Subcultivation Ratio:** A subcultivation ratio of 1:2 to 1:5 is recommended.

**Medium Renewal:** 2 to 3 times per week.

**Protocol:** Volumes used in this protocol are for 75 sq cm flasks; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes.

- Remove and discard culture medium.
- Briefly rinse the cell layer with Ca++/Mg++ free Dulbecco's phosphate-buffered saline (D-PBS) or 0.25% (w/v) Trypsin - 0.53 mM EDTA solution to remove all traces of serum which contains trypsin inhibitor.
- 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.

- Add 2.0 to 3.0 ml of complete growth medium and aspirate cells by gently pipetting.
- Resuspend the cell pellet in fresh growth medium. Add appropriate aliquots of the cell suspension to new culture vessels.
- Incubate cultures at 37°C.

**Cryopreservation Medium**

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

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**Comments**

Mycoplasma contamination was eliminated in September 1975. ATCC has confirmed that the ATCC® HTB-14™ cell line is male in origin based on STR, Y-chromosome paint and Q-band assays. However, based on current literature, the cell line is still of glioblastoma origin and the discrepancy of gender is not unusual. It is possible that the cell line was misidentified in the depositor's original publication.

**References**

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

**ATCC Warranty**

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.
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