



# VMM5A

CRL-3226™

## Description

**Organism:** *Homo sapiens*, human

**Cell Type:** melanocyte

**Age:** 81 years

**Gender:** Male

**Morphology:** Epithelial-like

**Growth properties:** Adherent

**Disease:** Melanoma; Stage IIIC, malignant

---

## 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 1

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

---

## Growth Conditions

**Temperature:** 37°C

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

---

## 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 base medium for this cell line is ATCC-formulated RPMI-1640 Medium, ATCC 30-2001. To make the complete growth medium, add the following

components to the base medium: fetal bovine serum (ATCC 30-2020) to a final concentration of 10%.

**Handling Procedure:** 1 amp --> 1 T-75

Thaw ampoule in 37°C water bath for approximately 2 minutes. Transfer thawed cell suspension to a 15.0 mL centrifuge tube containing 9 mL complete medium. Mix suspension by gentle inversion. Remove 0.5-1.0 mL for cell count. Centrifuge remaining suspension in the 15 mL centrifuge tube at 175-195 x g (1000 rpm in an IEC HN SII centrifuge or equivalent) for 5 minutes, RT°. Discard supernatant and gently resuspended pellet in 5ml fresh complete medium. Transfer 5 ml re-suspended cells into 1 T-75 flask containing 10 ml fresh medium. Place the cells in a 5% CO<sub>2</sub> incubator @ 37°C

**Subculturing procedure:**

Volumes are for a T-75 flask; Adjust accordingly

1. Remove and discard the cell culture medium from the flask.
2. Rinse the cell monolayer with Dulbecco's PBS without calcium or magnesium and remove.
3. Add 3 to 4 ml of the trypsin-EDTA solution, rotate flask to rinse cell monolayer, remove trypsin solution, and incubate at 37°C.
4. Once the cells appear to be detached, add 10 ml of complete growth medium with a pipette to the cell suspension to inactivate the trypsin. Gently wash any remaining cells from the growth surface of the flask. Check the cells with the microscope to be sure that most (>95%) are single cells. If cell clusters are apparent, continue to disperse the cells with gentle pipetting.
5. Subculture as necessary.
6. Place the flask back into the incubator. Examine the culture the following day to ensure the cells have reattached and are actively growing.
7. Repeat when cells reach confluence.

**Reagents for cryopreservation:** Fetal bovine serum supplemented with 10% (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: VMM5A (ATCC CRL-3226)

---

## 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® 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 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.

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 2024-10-25

---

## Contact Information

ATCC

10801 University Boulevard

## VMM5A

CRL-3226

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

---