



# pMSC1

## 77275™

### Description

**Clone type:** Vector

**Host:** *Escherichia coli* JM101 (ATCC 33876)

---

### Storage Conditions

**Product format:** Frozen

---

### 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.

---

### 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).

---

## Vector Information

**Construct size (kb):** 13.10000038146973

**Intact vector size:** 13.100

**Vector name:** pMSC1 (cosmid)

**Type of vector:** cosmid

**Construction:** Lawrist4, pYUB12

**Host range:** *Mycobacterium* sp.; *Escherichia coli*

**Vector information:**

Cloning capacity: 30-42 kb

**Cloning sites:** BamHI; HindIII; NheI

**Markers:** kanR; ampR

**Replicon:** lambda; pMB1; pAL5000

**Terminator:** trpA, rrnC, fd

---

## Growth Conditions

**Temperature:** 30°C

---

## Notes

Restriction digests of the clone give the following sizes (kb): EcoRV-8.2, 5.0; HindIII-13.5; BamHI-13.5; NheI-13.5; EcoRI-6.5, 2.5, 1.3. IMPORTANT: To prevent amplification of a rearranged and/or deleted cosmid, we recommend streaking on LB + amp plates at 30C and picking small colonies for liquid culture.

- ATCC staff

The vector should be selected using ampicillin and kanamycin in *E. coli*, and

kanamycin in *Mycobacterium*.

- personal communication

A cosmid shuttle vector useful for genomic DNA library construction.

- Gene 110: 115-118, 1992

The *ScaI* site between the *cos* sites can be used to linearize the plasmid. After packaging, 10.3 kb of vector is retained, permitting an insert range of 30 - 42 kb. Sequences hybridizing to pBR322, including *ampR*, are removed.

- Gene 110: 115-118, 1992

The pAL5000 ori permits replication in *Mycobacterium smegmatis* and *M. bovis* BCG.

- Gene 110: 115-118, 1992

The order of the major features in this plasmid is: *cos* - pMB1 ori - *ampR*/*ScaI* - *cos* - *trpA* terminator - *XbaI* - *HindIII* - *fd* terminator - *EcoRV* - pAL5000 ori - *BamHI* - *rrnC* terminator - *EcoRV* - *lambda* ori - *NheI* - *kanR*.

- Gene 110: 115-118, 1992

---

## Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: pMSC1 (ATCC 77275)

---

## 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

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