



# Mesenchymal Stem Cell Growth Kit for Bone Marrow-derived MSCs

PCS-500-041™

## Description

Mesenchymal Stem Cell Growth Kit for Bone Marrow-derived MSCs contains components that when added to Mesenchymal Stem Cell Basal Medium for Adipose, Umbilical and Bone Marrow-derived MSCs create a complete culture environment for multipotent stem cells derived from normal human bone marrow (eg, Bone Marrow-derived MSCs, ATCC PCS-500-012). The serum (7% FBS) medium formulation is designed to support normal, undifferentiated mesenchymal stem cell morphology and promote rapid growth and proliferation. No feeder layers, extracellular matrix proteins, or other substrates are required.

**Shipping information:** 1 kit

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## Storage Conditions

**Product format:** Frozen

**Storage conditions:** -20°C or colder, -70°C for long-term storage

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## 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.

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## Biosafety Information

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ATCC determined that a biosafety level is not applicable to this 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 complete your own risk assessment and understand any potential hazards associated with the material per your organization's policies and procedures and any other applicable regulations as enforced by your local or national agencies.

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## 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).

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## Handling Procedures

### Unpacking and Storage Instructions

1. Check all containers for leakage or breakage.
2. Store the growth kit(s) at either -20°C in a freezer that is not self-defrosting or at -70°C for long-term storage. If thawed upon arrival, the Growth Kit can be stored at 2°C to 8°C and added to the basal medium within 72 hours of receipt.

### Preparation of Complete Growth Media

1. Obtain one Mesenchymal Stem Cell Growth Kit for Bone Marrow-derived MSCs from the freezer; make sure that the caps of all components are tight.
2. Thaw the components of the growth kit just prior to adding them to the basal medium.
3. Obtain one bottle of Mesenchymal Stem Cell Basal Medium (485 mL) from cold storage.
4. Decontaminate the external surfaces of all growth kit component vials and the basal medium bottle by spraying them with 70% ethanol.
5. Using aseptic technique and working in a laminar flow hood or biosafety

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cabinet, transfer the indicated volume of each growth kit component, as indicated in Table 1, to the bottle of basal medium using a separate sterile pipette for each transfer.

**Table 1.** Mesenchymal Stem Cell Growth Kit for Bone Marrow-derived MSCs components

Component	Volume	Final Concentration
FBS	35 mL	7% FBS
rh IGF-1	0.5 mL	15 ng/mL
rh FGF-b	0.5 mL	125 pg/mL
L-Alanyl-L-Glutamine	6 mL	2.4 mM

Antimicrobials and phenol red are not required for proliferation but may be added if desired. The recommended volume of each **optional** component to be added to the complete growth media is summarized in Table 2.

**Table 2.** Addition of Antimicrobials/Antimycotics and Phenol Red (Optional)

Component	Volume	Final Concentration
Gentamicin-Amphotericin B Solution	0.5 mL	Gentamicin: 10 µg/mL Amphotericin B: 0.25 µg/mL
Penicillin-Streptomycin-Amphotericin B Solution	0.5 mL	Penicillin: 10 Units/mL Streptomycin: 10 µg/mL Amphotericin B: 25 ng/mL

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Phenol Red	0.5 mL	33 $\mu$ M
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6. Tightly cap the bottle of complete growth medium and swirl the contents gently to assure a homogeneous solution. Do not shake forcefully to avoid foaming. Label and date the bottle.
7. Complete growth media should be stored in the dark at 2°C to 8°C (do not freeze). When stored under these conditions, complete growth media is stable for two weeks.

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## Quality Control Specifications

**Bacterial and fungal testing:** Not detected

**Functional tests:** Rate of proliferation and morphology comparable to control.

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## Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: Mesenchymal Stem Cell Growth Kit for Bone Marrow-derived MSCs (ATCC PCS-500-041)

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## References

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

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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,

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