



# Mesenchymal Stem Cell Basal Medium for Adipose, Umbilical and Bone Marrow-derived MSCs

**PCS-500-030™**

## Description

Mesenchymal Stem Cell Basal Medium for Adipose, Umbilical, and Bone Marrow-derived MSCs is a sterile, phenol red-free, liquid tissue culture medium intended for use as one component in a complete ATCC Primary Cell Solutions system. This low serum (2% FBS) system supports mesenchymal stem cells derived from various normal human tissues lipoaspirates, and umbilical cord. Mesenchymal Stem Cell Basal Medium for Adipose, Umbilical, and Bone Marrow-derived MSCs contains essential and non-essential amino acids, vitamins, other organic compounds, trace minerals, and inorganic salts. To support the proliferation and plating efficiency of various adult stem cells, Mesenchymal Stem Cell Basal Medium with the appropriate cell-specific growth kit. When using this complete media system, the growth of undifferentiated mesenchymal stem cells does not need feeder layers, extracellular matrix proteins, or other substrates.

**Volume:** 485 mL

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## Storage Conditions

**Storage conditions:** 2°C to 8°C

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## Intended Use

This product is intended for laboratory research use only. It is not intended for any

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animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

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## 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.

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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

1. Obtain one Mesenchymal Stem Cell Growth Kit for Adipose and Umbilical-derived MSCs –Low serum 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 for Adipose, Umbilical and Bone Marrow-derived MSCs (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 cabinet, transfer the indicated volume of each growth kit component, as

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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 Adipose and Umbilical-derived MSCs –Low serum Components

| Component            | Volume | Final Concentration   |
|----------------------|--------|---|
| MSC Supplement       | 10 mL  | 2% FBS<br>5 ng/mL rh FGF basic<br>5 ng/mL rh FGF acidic<br>5 ng/mL rh EGF |
| 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<br>Amphotericin |

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|  |        |  |
|--|--------|--|
|  |        | B: 0.25 µg/mL  |
| Penicillin-<br>Streptomycin-<br>Amphotericin<br>B Solution | 0.5 mL | Penicillin: 10<br>Units/mL<br><br>Streptomycin:<br>10 µg/mL<br><br>Amphotericin<br>B: 25 ng/mL |
| Phenol Red   | 0.5 mL | 33 µM  |

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.

### Quality Control Specifications

**Bacterial and fungal testing:** Not detected

**Mycoplasma contamination:** Not detected

**Endotoxin:** < 0.5 EU/mL

**Osmolality:** 270 ± 10 mOsm/kg

**pH:** 7.8 ± 0.3

**Functional tests:** Rate of proliferation and morphology

### Material Citation

If use of this material results in a scientific publication, please cite the material in the

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following manner: Mesenchymal Stem Cell Basal Medium for Adipose, Umbilical and Bone Marrow-derived MSCs (ATCC PCS-500-030)

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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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## Revision

This information on this document was last updated on 2023-08-19

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