ATCC

Product Sheet

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

Please read this FIRST

Storage Temp.
4 to 8°C, protect from light

Biosafety Level
1

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Description

Product 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 is designed to support mesenchymal stem cells derived from various normal human tissues including lipoaspirates and umbilical cord. Mesenchymal Stem Cell Basal Medium 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 types of adult stem cells, Mesenchymal Stem Cell Basal Medium must be supplemented with the appropriate cell-specific growth kit. When using this complete media system, the growth of undifferentiated mesenchymal stem cells is supported without the use of feeder layers, extracellular matrix proteins or other substrates.

A. For mesenchymal stem cells derived from human lipoaspirates (e.g., Adipose-Derived Mesenchymal Stem Cells; Normal, Human, ATCC PCS-500-011) or umbilical cord (Umbilical Cord-Derived Mesenchymal Stem Cells; Normal, Human, ATCC PCS-500-010), supplement Mesenchymal Stem Cell Basal Medium for Adipose, Umbilical and Bone Marrow-derived MSCs with the Mesenchymal Stem Cell Growth Kit for Adipose and Umbilical-derived MSCs –Low serum (ATCC PCS-500-040).
B. For mesenchymal stem cells derived from bone marrow (Bone Marrow-derived Mesenchymal Stem Cells; Normal, Human, ATCC PCS-500-012) supplement Mesenchymal Stem Cell Basal Medium for Adipose, Umbilical and Bone Marrow-derived MSCs with the Mesenchymal Stem Cell Growth Kit for Bone Marrow-derived MSCs (ATCC PCS-500-041)
C. Optional media supplements:
    1. Gentamicin-Amphotericin B Solution (ATCC PCS-999-025)
    2. Penicillin-Streptomycin-Amphotericin B Solution (ATCC PCS-999-002)
    3. Phenol Red (ATCC PCS-999-001)

A.
    1.

Volume: 485 mL

Directions for Use

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 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 5 ng/mL rh FGF basic 5 ng/mL rh FGF acidic 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 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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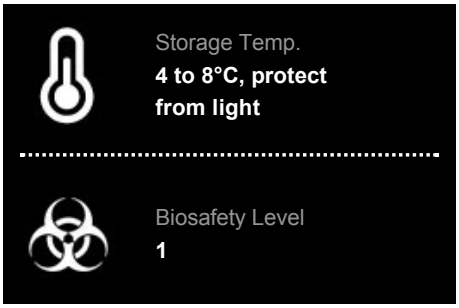

Phenol Red	0.5 mL	33 µM

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.

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Disclaimers

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