PLTMax® Human Platelet Lysate

Stem Cell Supplement

Cat. # SCM142

FOR RESEARCH USE ONLY.
NOT FOR USE IN DIAGNOSTIC PROCEDURES.
NOT FOR HUMAN OR ANIMAL CONSUMPTION.

pack size: 500 mL

Store at -80°C

Certificate of Analysis

Description

PLTMax® Human Platelet Lysate is a growth factor rich supplement that is a superior alternative to fetal bovine serum (FBS) for human mesenchymal stem cell (MSC) culture. Optimal growth of MSCs can be achieved with 5% PLTMax Human Platelet Lysate. PLTMax Human Platelet Lysate has been used to effectively to grow mesenchymal stem cells derived from other species including mouse, rabbit and porcine.

PLTMax Human Platelet Lysate (Cat. No. SCM141) is for research use only (RUO) and not intended for human or animal diagnostic or therapeutic use.

Source

PLTMax Human Platelet Lysate is derived from normal human donor platelets collected at U.S. blood centers. Multiple donors units are pooled in large batch sizes and manufactured to produce a consistent product. Heparin (porcine) approved for human intravenous use is used in the preparation of PLTMax Human Platelet Lysate.

Quality Control

All human derived materials are obtained from government inspected facilities and are of US origin. Each donor unit was approved for human use and has been tested for infectous diseases including HIV-1, HIV-2, HIV-Ag, HCV, HBsAg, and RPR for Syphilis.

Lot Acceptance Criteria:

- pH: 6.8-7.8
- Total protein: 4.0-6.5 g/dl
- Endotoxin USP <85>: <10 EU/mL
- Mycoplasma: Not detected
- Sterility Testing: Negative for growth

Storage and Handling

- Store at -80°C upon receipt. Thaw at room temperature or in a water bath. After thawing, aliquot and store at -20°C or colder. Long term storage at -80°C is recommended.
- IMPORTANT NOTE: This product contains human derived materials and must be treated as potentially infectious. Universal precautions for biological samples should be used in handling and disposal.

Particulate Formation

- Product has been aseptically filtered with 0.2 µm filters. Particulates will be observed after thawing. Particulate formation is normal will not affect performance even in the presence of large particulates. Filtration is not recommended.
- To reduce particulates from forming, minimize freeze/thaw cycles and extended storage at 4°C. Some particulate formation can be reversed with brief incubation at 37°C, if desired.

Instructions for Use

- For optimal growth of human mesenchymal stem cells, add 5% vol/vol PLTMax Human Platelet Lysate to usual cell culture medium such as DMEM and αMEM.
- Plate cells at approximately $1.5x10^3$ cells per cm^2.
- Do not allow primary MSC confluence to exceed 80%.
- IMPORTANT NOTE: Add Heparin to the media at a final concentration of 2 U/mL. Failure to add heparin may result in coagulation of certain media.

Rev.1.0/2017-01-18/SCM142/NJA

SPECIES LEGEND: **H** Human **Ca** Canine **M** Mouse **R** Rat **Rb** Rabbit **B** Bovine **P** Porcine **WR** Most Common Vertebrates

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Representative Lot Testing

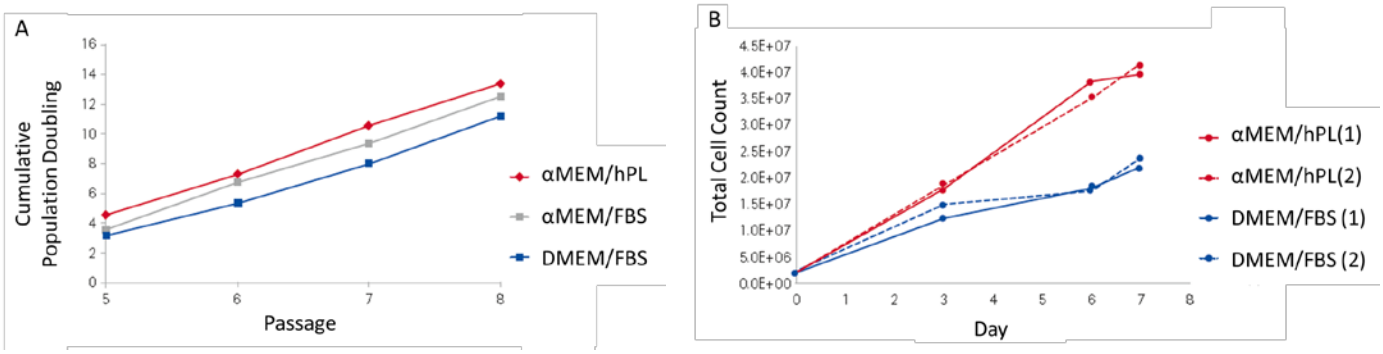

Figure 1. αMEM + PLTMax Human Platelet Lysate (hPL) supports better growth of human MSCs than DMEM + FBS. A: Growth of human MSCs cultured in αMEM supplemented with 5% hPL or 10% FBS as compared to DMEM + 10 % FBS over 4 passages in T150 flasks, or B: in duplicate 125 mL spinner flasks for 7 days, demonstrating enhanced growth in αMEM + PL.

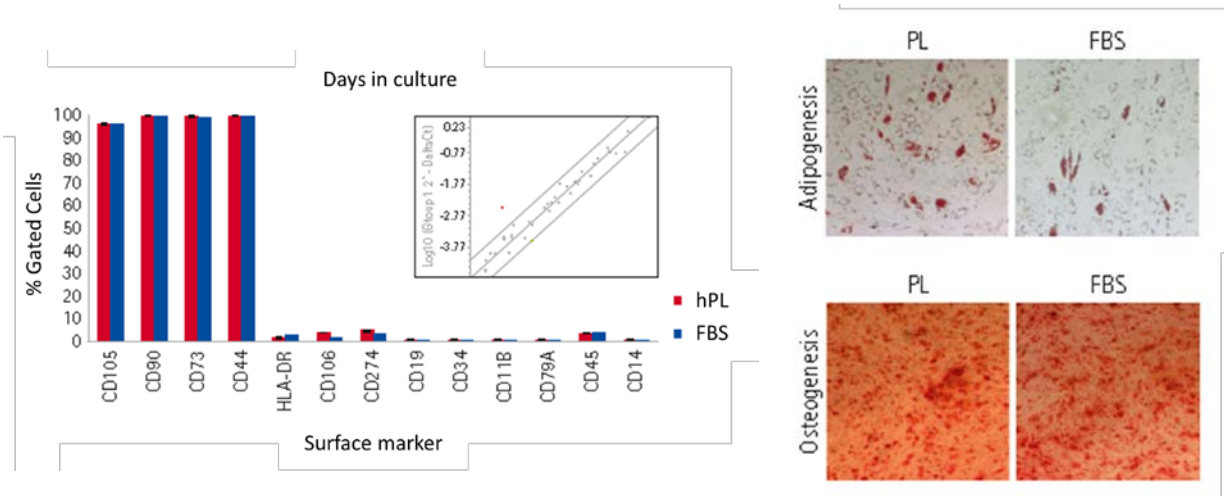

Figure 2. Equivalent biomarker expression and differentiation potential in human MSCs expanded with platelet lysate (hPL) or FBS. Left: Equivalent surface marker levels were detected on human MSCs expanded with hPL in comparison to FBS. Of the 46 human MSC-relevant genes examined, 96 % had high correlation between the two conditions. Right: Cells harvested on day 14 were positive for the adipocyte stain Oil Red and for the osteocyte stain Alizarin Red, following the respective differentiation protocols.

RELATED PRODUCTS

cat #	Description
SCC034	Human Mesenchymal Stem Cells (Bone Marrow)
SCC036	Human Mesenchymal Stem Cells (derived from hES cells)
SCC038	Human Mesenchymal Stem Cells (Adipose)

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EMD Millipore Corporation, 28820 Single Oak Drive, Temecula, CA 92590, USA 1-800-437-7500
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