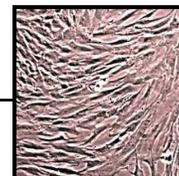


## Poietics™ hMSC human mesenchymal stem cells & media



### Introduction

Bone marrow contains a population of rare progenitor cells known as mesenchymal stem cells (MSC) capable of replication as undifferentiated cells or differentiating into bone, cartilage, fat, muscle, tendon and marrow stroma. Poietics™ human mesenchymal stem cell (hMSC) system contains normal human mesenchymal stem cells and medium for their growth. Cells are frozen in passage two and we recommend they are used by passage five.

Each system can generate hMSC cultures for experimental studies in cell differentiation, including osteogenesis and bone mineralization, chondrogenesis and cartilage formation, adipogenesis and fat accumulation. They are excellent tools for gene delivery research, functional genomics, drug screening, high throughput screening and toxicology.

Poietics™ cells and medium are quality tested and guaranteed to give optimum performance.

### Cell system components (need to be purchased separately)

- One mesenchymal stem cell product ≥750,000 cells in a 1 ml vial
- One mesenchymal stem cell medium BulletKit™, 500 ml  
 Poietics™ MSCGM™ BulletKit™ (PT-3001) contains one 440 ml bottle of mesenchymal stem cell basal medium and the following growth supplements; mesenchymal stem cell growth supplement (MCGS), 50 ml; L-glutamine, 10 ml; GA-1000, 0.5 ml.
- One trypsin/EDTA solution (CC-3232) 100 ml

### Performance

Recommended seeding density for subculture	5000 - 6000 cells/cm <sup>2</sup>
Recommended feeding interval	3 - 4 days
Typical time from seeding to subculture readiness	6 - 7 days

### Characterization of cells

Routine characterization of hMSC includes testing for surface antigens and functional testing for differentiation down specific lineage pathways. Cells test CD105<sup>+</sup>, CD166<sup>+</sup>, CD29<sup>+</sup>, CD44<sup>+</sup>, CD14<sup>-</sup>, CD34<sup>-</sup>, CD45<sup>-</sup> by flow cytometry. Cells are tested using *in vitro* assays and are found to be positive for: adipogenic lineage as indicated by neutral lipid; chondrogenic lineage as indicated by collagen type II and osteogenic lineage as indicated by calcium mineralization.

### Quality control

HIV-1, hepatitis B and hepatitis C are not detected for all donors and/or cell lots. All cells are performance assayed and test negative mycoplasma, bacteria, yeast and fungi. Cell viability and morphology are measured after recovery from cryopreservation. A certificates of analysis (COA) for each lot of cryopreserved cells is shipped with each order. COA for all other products are available upon request.

### Source

Human bone marrow is withdrawn from the posterior iliac crest of the pelvic bone of normal volunteers.

### Ordering information

PT-2501	hMSC - human mesenchymal stem cells	≥750,000 cells
PT-3001	MSCGM™ BulletKit™, mesenchymal Stem cell basal medium plus SingleQuots™ of growth supplements	
PT-3238	Mesenchymal stem cell basal Medium	440 ml
PT-4105	MSCGM™ SingleQuots™, formulates MSCBM to MSCGM™	
CC-3232	Trypsin/EDTA solution	100 ml

## Limited use license

Mesenchymal stem cells are produced for Lonza by Osiris Therapeutics, Inc. and are subject to the following limited use license:

The included biological material, including progeny and derivatives, (collectively referred to as "Material") is licensed to you under specific terms. You are responsible for ensuring that the terms of the license agreement are met.

1. **GRANTS OF LICENSE:** *Lonza grants you a nontransferable, nonexclusive license to use the Material for research.*
2. **NOT FOR HUMAN USE:** *The Material may not be used: a) in humans; b) in conjunction with human clinical trials; c) in association with human diagnostics.*
3. **MATERIAL NOT TRANSFERABLE:** *You may not transfer the Material to any other person or organization*
4. **PATENT NOTICE:** *Material is under license from Osiris Therapeutics, Inc. Material is covered by US Patent 5,486,359 and others.*

When placing an order or for technical service, please refer to the product numbers and descriptions listed above. For a complete listing of all Poietics™ products, refer to the Lonza website or the current Lonza catalog. To obtain a catalog, additional information or technical service you may contact Lonza by web, e-mail, telephone, fax or mail.

## Product warranty

CULTURES HAVE A FINITE LIFESPAN *IN VITRO*. Lonza warrants its cells only if Poietics™ media are used, and the recommended protocols are followed. Cryopreserved hMSC cells are assured to be viable and functional when thawed and maintained properly.

**THESE PRODUCTS ARE FOR RESEARCH USE ONLY.** Not approved for human or veterinary use, for application to humans or animals, or for use in clinical or *in vitro* procedures.

**WARNING: CLONETICS™ AND POIETICS™ PRODUCTS CONTAIN HUMAN SOURCE MATERIAL, TREAT AS POTENTIALLY INFECTIOUS.** Each donor is tested and found non-reactive by an FDA approved method for the presence of HIV-1, hepatitis B virus and hepatitis C virus. Where donor testing is not possible, cell products are tested for the presence of viral nucleic acid from HIV, hepatitis B virus, and hepatitis C virus. Testing can not offer complete assurance that HIV-1, hepatitis B virus, and hepatitis C virus are absent. All human sourced products should be handled at the biological safety level 2 to minimize exposure of potentially infectious products, as recommended in the CDC-NIH manual, [Biosafety in Microbiological and Biomedical Laboratories](#), 5<sup>th</sup> edition. If you require further information, please contact your site safety officer or scientific support.