Features and Benefits

- Human-derived product rich in growth factors and proteins that maximize cell growth
- Pooled from multiple donors
- Manufactured to reduce lot-to-lot variation
- Extensive serology testing ensures safety for each lot
- Improves proliferation of MSCs compared to FBS without loss of phenotype
- Enhances genetic stability in stem cell cultures

Performance

- Extensive pre-testing on batches
- Increases cell growth kinetics and reduce cell doubling time
- Enhances stem cell proliferation and reduces supplementation
- Maintenance of cell phenotype and differentiation potential

Population doubling

Cumulative population doubling of bone marrow-derived MSC was higher in PLSOLUTION compared to FBS.
Proliferation rate

Proliferation of human bone marrow-derived MSC increased in a concentration-dependent manner with PLMATRIX, PLSOLUTION and FBS, respectively.

Differentiation potential

Osteogenic and adipogenic differentiation potential of human bone marrow-derived MSC in FBS, PLSOLUTION and PLMATRIX.

Recommended for

- Human Mesenchymal Stromal Cells from Bone Marrow (hMSC-BM)
- Human Mesenchymal Stromal Cells from Umbilical Cord (hMSC-UC)
- Human Mesenchymal Stromal Cells from Adipose Tissue (hMSC-AT)
- Human Dermal Fibroblasts (HDF)

Safety Matters

- Standard testing of donor for infectious diseases
- Sterilized by 0.1 µm filtration (mycoplasma-free)
- Final product testing for microbial and endotoxin contamination
- Quality control testing carried out in a certified test laboratory

Availability

- bFGF and EGF-qualified
- Human MSC and dermal fibroblasts-qualified
- Sample aliquots available for testing in your specific conditions
- Lot reservations are available
How to order:

- PLSolution, research grade, 25 ml PLS-25.01
- PLSolution, research grade, 100 ml PLS-100.01
- PLSolution, GMP - clinical grade, 100 ml PLS-100.02
- PLMatrix, research grade, 5 ml PLM-005.01

Please inquire for more technical information

References

- Platelet lysate from whole blood-derived pooled platelet concentrates and apheresis-derived platelet concentrates for the isolation and expansion of human bone marrow mesenchymal stromal cells: production process, content and identification of active components. Cytotherapy. 2012; 14(5):540-554
- Phenotypical and functional characteristics of mesenchymal stem cells from bone marrow: comparison of culture using different media supplemented with human platelet lysate or fetal bovine serum. Stem Cell Res Ther. 2012; 3(1):6
- Expansion of adipose mesenchymal stromal cells is affected by human platelet lysate and plating density. Cell Transplant. 2011; 20(9):1409-1422
- Human platelet lysate permits scale-up of dental pulp stromal cells for clinical applications. Cytotherapy. 2011; 13(10):1221-1233
- Effect of platelet lysate on the functional and molecular characteristics of mesenchymal stem cells isolated from adipose tissue. Curr Stem Cell Res Ther. 2011; 6(2):105-114
- Human alternatives to fetal bovine serum for the expansion of mesenchymal stromal cells from bone marrow. Stem Cell. 2009; 27(9):2331-2341
- Human platelet lysate can replace fetal bovine serum for clinical-scale expansion of functional mesenchymal stromal cells. Transfusion. 2007; 47(8):1436-1446