FUJIFILM
FUJIFILM Biosciences

Performance-Optimized Solutions for MSC Expansion

PRIME-XV MSC Basal XSFM and hPL Supplementation Pairings

Versatile solutions to enhance cell growth and viability at every stage of research and development

Achieve Reliable MSC Expansion While Reducing Raw Material Risk

For consistency and control over MSC outcomes, whether translational, clinical, or large-scale manufacturing, experience the reliability of PRIME-XV MSC Basal XSFM + hPL (Human Platelet Lysate). Replace serum-based reagents with a xeno- and serum-free alternative that generates results.

A powerful combination promoting MSC viability and functionality

PRIME-XV MSC Basal XSFM

Xeno-free and serum-free
Ensures consistent results with minimal variability

Optimized formulation
Supports high-yield MSC expansion while preserving differentiation potential

GMP-ready
For preclinical research and scale-up

PLTGold hPL Supplement

Rich in growth factors
Enhances MSC proliferation and functionality

Standardized production
Delivers consistent performance across batches

GMP quality
Ensures high safety standards without compromising efficacy (RUO available)

Your Toolbox for Enhancing MSC Cultures at Any Stage

Our flexible cell therapy portfolio offers reagents, classical media, and supplements to fit your needs with the high performance your MSC work demands.

PRIME-XV MSC Basal XSFM + hPL Enhances Expansion

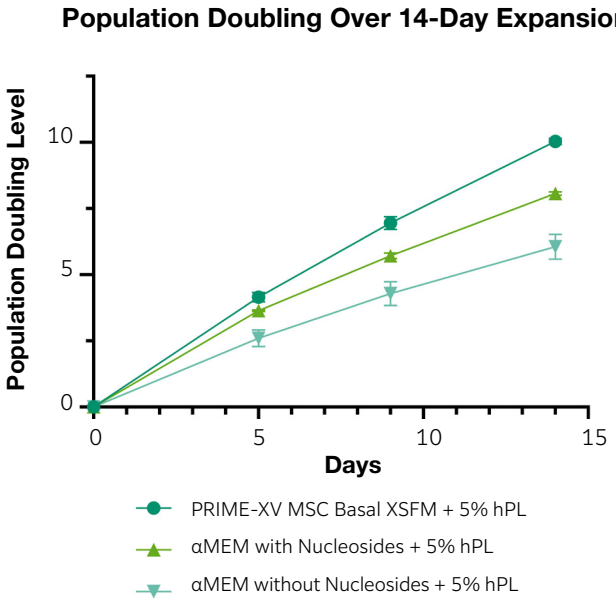

Figure 1. PRIME-XV MSC Basal XSFM supplemented with 5% hPL significantly outperforms alpha-MEM (αMEM) supplemented with 5% hPL. After 14 days of MSC expansion, PRIME-XV MSC Basal XSFM supplemented with 5% hPL (PLTGold-GI, Mill Creek) outperforms αMEM (with nucleosides) supplemented with 5% hPL by ~2 total population doublings (i.e. ~4-fold greater expansion) and αMEM without nucleosides by ~4 total population doublings (i.e. ~16-fold greater expansion).

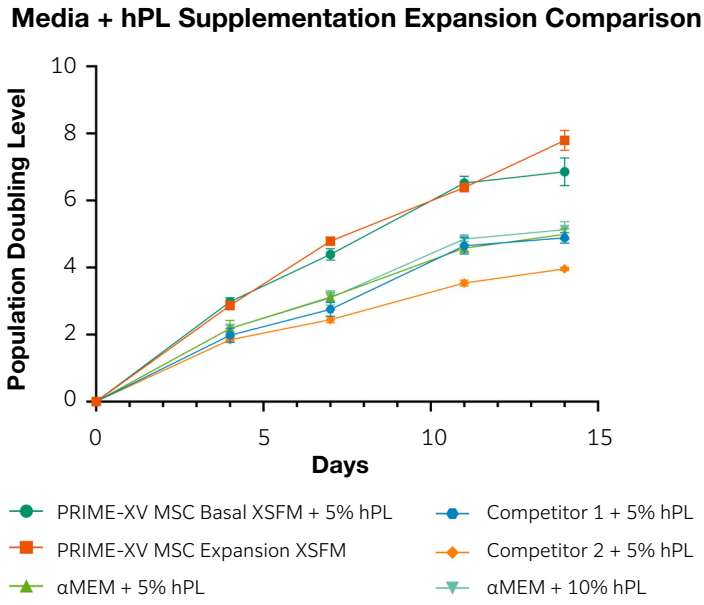

Figure 2. PRIME-XV MSC Basal XSFM supplemented with 5% hPL supports robust expansion of hMSCs. MSC Basal XSFM supplemented with 5% hPL (PLTGold-GI, Mill Creek) achieves similar MSC growth to PRIME-XV MSC Expansion XSFM. MSC Basal XSFM supplemented with 5% hPL outperforms Competitor 1 and 2 MSC Media supplemented with 5% hPL and αMEM supplemented with 5% or 10% hPL. Data shows a minimum of triplicate measurements from a single donor.

Maintains MSC Phenotype

Table 1. PRIME-XV MSC Basal XSFM supplemented with 5% hPL (PLTGold-GI, Mill Creek) maintains MSC phenotype based on surface markers.

Sample	CD73	CD90	CD105	CD34	CD45	CD14	CD19	HLA-DR
PRIME-XV MSC Basal XSFM + 5% hPL	**98.8%**	**99.7%**	**99.2%**	0.0%	0.2%	0.1%	0.2%	0.0%
Competitor 1 + 5% hPL	**99.9%**	**100.0%**	**99.6%**	0.0%	0.1%	0.0%	0.0%	0.0%
Competitor 2 + 5% hPL	**100.0%**	**100.0%**	**86.8%**	0.0%	0.1%	0.0%	0.0%	0.0%
αMEM + 5% hPL	**100.0%**	**100.0%**	**99.0%**	0.0%	0.2%	0.0%	0.0%	0.0%
αMEM + 10% hPL	**98.8%**	**100.0%**	**99.6%**	0.0%	0.1%	0.1%	0.1%	0.0%
PRIME-XV MSC Expansion XSFM	**98.8%**	**99.9%**	**99.9%**	0.1%	0.0%	0.0%	0.0%	0.1%

Data show the average of a minimum of triplicate measurements from a single donor (BM-MSC). Positive markers (CD73, CD90, CD105) are maintained, negative markers (CD34, CD45, CD14, CD19, HLA-DR) remained low.

PRIME-XV MSC Basal XSFM Supports Robust Expansion of MSCs from Various Tissue Sources

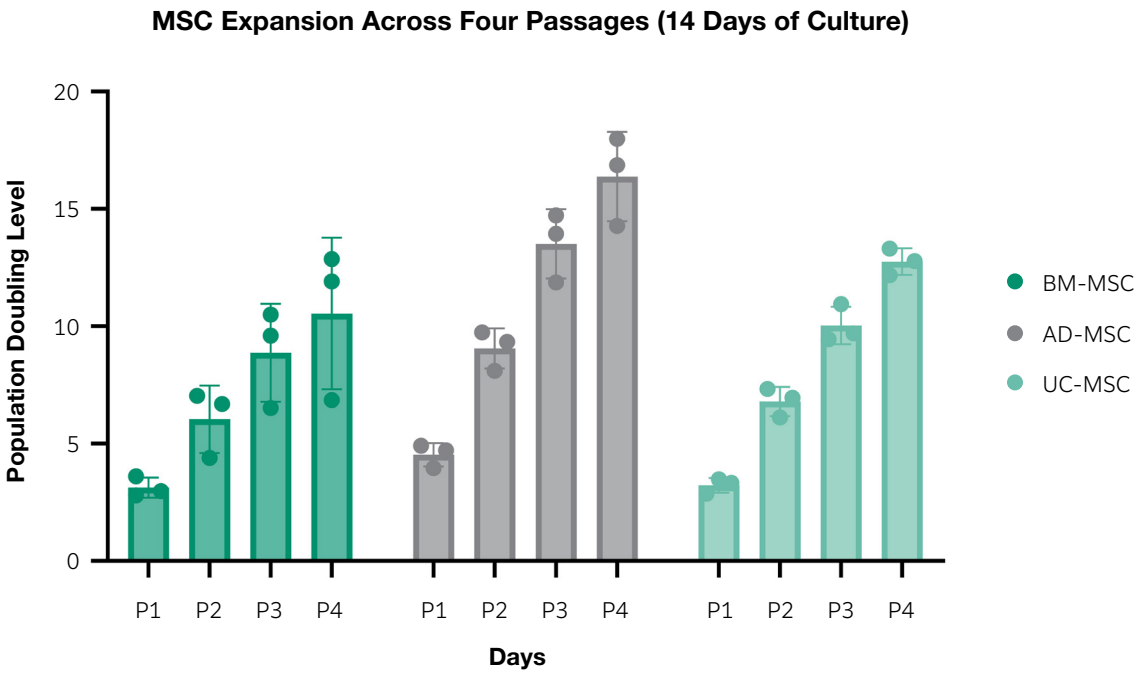

Figure 3. PRIME-XV MSC Basal XSFM supplemented with 5% hPL successfully supports expansion of various sources of hMSCs. Over 4 passages of culture, PRIME-XV MSC Basal XSFM supplemented with 5% hPL (PLTGold-GI, Mill Creek) supports reliable expansion of hMSCs across 3 different tissue origins. Each datum point represents the average of a single donor, with a total of 3 donors tested per tissue origin.

Maintains MSC Phenotype Across 3 Tissue Sources

Table 2. PRIME-XV MSC Basal XSFM supplemented with 5% hPL (PLTGold-GI, Mill Creek) maintains MSC phenotype based on surface markers.

Sample	CD73	CD90	CD105	CD34	CD45	CD14	CD19	HLA-DR
BM-MSC	100.0%	100.0%	99.1%	0.11%	0.114%	0.021%	0.067%	0.016%
AD-MSC	99.5%	99.8%	99.7%	0.036%	0.089%	0.042%	0.125%	0.003%
UC-MSC	100.0%	100.0%	97.5%	0.056%	0.043%	0.036%	0.043%	0.027%

The surface marker data show the average of 3 different donors for each source of hMSC measured after 4 passages. Positive markers (CD73, CD90, CD105) are maintained, negative markers (CD34, CD45, CD14, CD19, HLA-DR) remained low.

PRIME-XV MSC Basal XSFM + PLTMax 5% hPL: A Seamless Transition from RUO to GMP

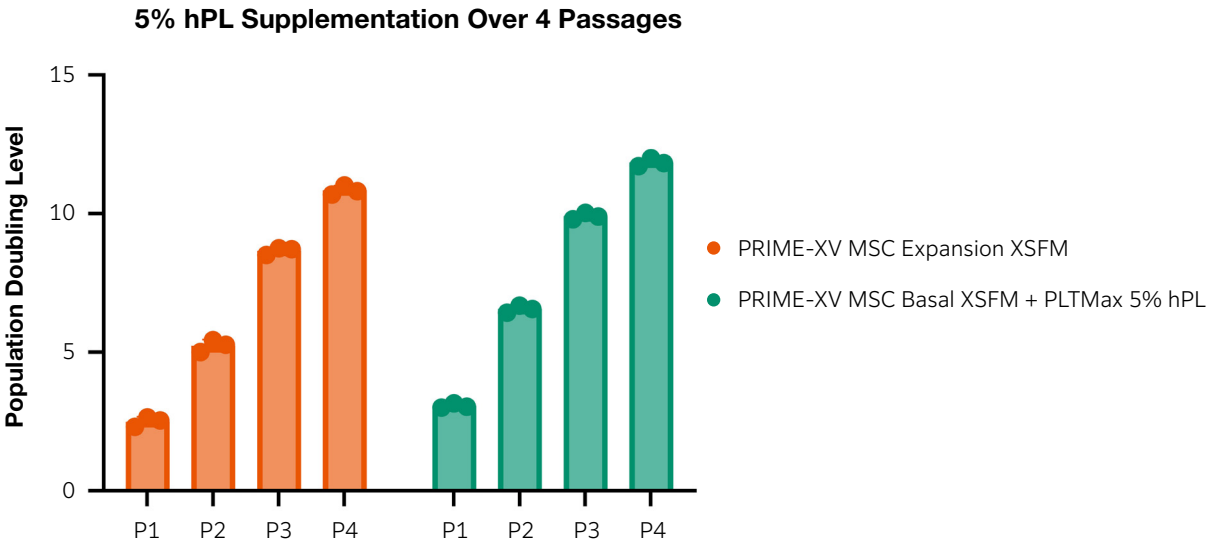

Figure 4. PRIME-XV MSC Basal XSFM supplemented with PLTMax 5% hPL supports robust expansion of hMSCs. PRIME-XV MSC Basal XSFM supplemented with 5% hPL (PLTMax Research Grade, Mill Creek) achieves similar MSC growth compared to PRIME-XV MSC Expansion XSFM.

hPL Supplementation to PRIME-XV MSC Expansion XSFM Improves Adhesion Without Pre-coating

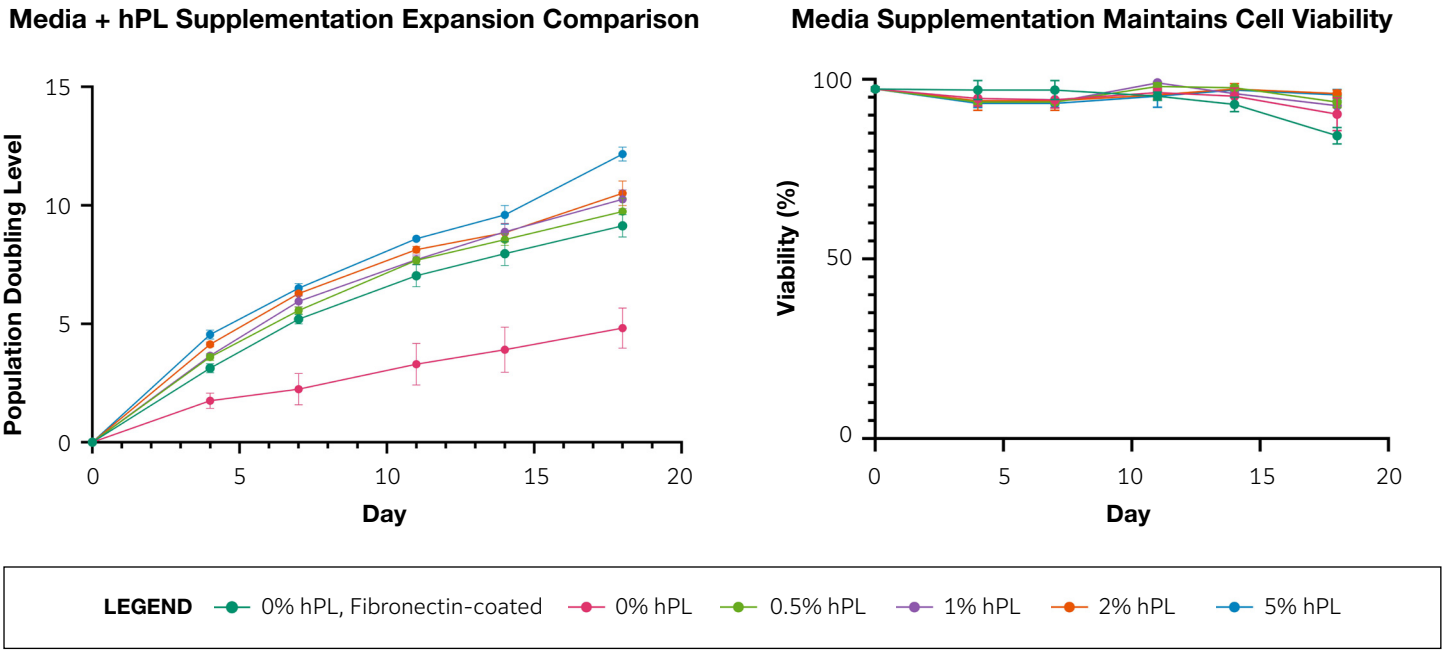

Figure 5. hPL supplementation to PRIME-XV MSC Expansion XSFM significantly improves MSC adhesion and/or proliferation. This addition of hPL (as low as 0.5% tested) to PRIME-XV MSC Expansion XSFM eliminates the need to precoat the culture surface and results in significantly higher population doubling levels in a dose-dependent manner. The increase in the population doubling levels was achieved without any decrease in the cell viability.

Meet the Increasing Demands of MSC Research and Early-stage Applications

Immunology

Extracellular Vesicles

Tissue Engineering

Regenerative Medicine

Inflammatory Diseases

The PRIME-XV MSC Portfolio can streamline workflow development and processes for a wide range of clinical applications.

- PRIME-XV MSC Basal XSFM
- PRIME-XV MSC Expansion XSFM
- PRIME-XV MSC Dual Component Kit with Phenol Red
- PRIME-XV MSC Dual Component Kit without Phenol Red
- PLTGold RUO
- PLTGold GI
- PLTGold Clinical
- PLTMax RUO

PrimePath

Therapy solutions that evolve with you

Supporting your therapies from discovery to commercialization

Start your development journey with PRIME-XV MSC Basal XSFM + hPL and explore your options to innovate further with a wide range of reagents, classical media, services, and testing.

Giving *life* to your next breakthrough

FUJIFILM Biosciences is dedicated to empowering you at every stage of discovery, development, and commercialization. By offering a diverse portfolio of life sciences products and services, we are primed to support your breakthroughs and accelerate the creation of life-changing treatments.

Through collaboration, expertise, and consistency, our purpose is being your *Partners for Life*.

Explore all your options for MSC expansion

PRIME-XV MSC Basal XSFM + hPL provides you optimized serum-and xeno-free solutions without compromising quality and performance.

Contact **getinfo@fujifilm.com** today to start boosting MSC growth while minimizing risk.

fujifilmbiosciences.fujifilm.com/prime-xv-msc-basal-xsfm

Global Supply Continuity for Gene Therapy

PRIME-XV MSC Basal XSFM is manufactured following GMP using qualified raw materials to ensure continuity of supply and lot-to-lot reliability from our facilities all over the world.

- Stringent raw materials control and sourcing program
- Meets the highest global and regional quality standards
- Fulfills regulatory demands for each lot
- COA, COO, TSE/BSE statements
- ISO 13485, EN 13485:2016 certified
- Drug Master Files (DMF) supported*

* Available upon request

FUJIFILM BIOSCIENCES ORDERING INFORMATION

Product Description	Catalog #	Size*	Additional Information
PRIME-XV MSC Basal XSFM	91235G	500 mL	Xeno-free, serum-free basal medium with phenol red.
PRIME-XV MSC Expansion XSFM	91149	250 mL 1 L	Xeno-free, serum-free expansion medium.
PRIME-XV MSC Dual Component Kit with Phenol Red	91149DC	5 L basal 10 mL supplement	Xeno-free, serum-free basal medium and frozen supplement in bag for Quantum and other hollow fiber bioreactors. With phenol red.
PRIME-XV MSC Dual Component Kit without Phenol Red	91214DC	5 L basal 10 mL supplement	Xeno-free, serum-free basal medium and frozen supplement in bag for Quantum and other hollow fiber bioreactors. Without phenol red.

*Custom sizes and packaging available upon request.

MILL CREEK PLT ORDERING INFORMATION

Product Description	Catalog #	Size
PLTGold Research Grade	PLTGold27R	27 mL
	PLTGold100R	100 mL
	PLTGold500R	500 mL
	PLTGold1000R	1,000 mL
PLTGold GI Clinical Grade (GMP)	PLTGold27GMP-GI	27 mL
	PLTGold100GMP-GI	100 mL
	PLTGold500GMP-GI	500 mL
	PLTGold1000GMP-GI	1,000 mL
PLTGold Clinical Grade (GMP)	PLTGold27GMP-GMP	27 mL
	PLTGold100GMP-GMP	100 mL
	PLTGold500GMP-GMP	500 mL
	PLTGold1000GMP-GMP	1,000 mL
PLTMax Research Grade	PLTMax27R	27 mL
	PLTMax100R	100 mL
	PLTMax500R	500 mL
	PLTMax1000R	1,000 mL

Partners for *Life*

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