IrvineScientific®

PRIME-XV® MSC Expansion SFM

Human Mesenchymal Stromal/Stem Cell (MSC)
Expansion Serum-Free Medium
Catalog # 91135

FEATURES & BENEFITS

- Outperforms leading competitors and serum-containing media in expansion while maintaining MSC characteristics and multipotency
- Supports cell expansion of MSCs derived from different tissue sources
- Little to no adaptation required from serum-containing medium
- Manufactured under cGMP conditions
- Available in one 250mL complete component and ready-to-use
- Custom packaging available

RELATED PRODUCTS:

PRIME-XV MSC Expansion XSFM (91149)
PRIME-XV Adipogenic Differentiation SFM (91137)
PRIME-XV Chondrogenic Differentiation XSFM (91138)
PRIME-XV Osteogenic Differentiation SFM (91132)
PRIME-XV MatrIS F (31001)
PRIME-XV Human Fibronectin (31002)
PRIME-XV FreezIS (91139)
PRIME-XV FreezIS MSC DMSO-Free (91140)

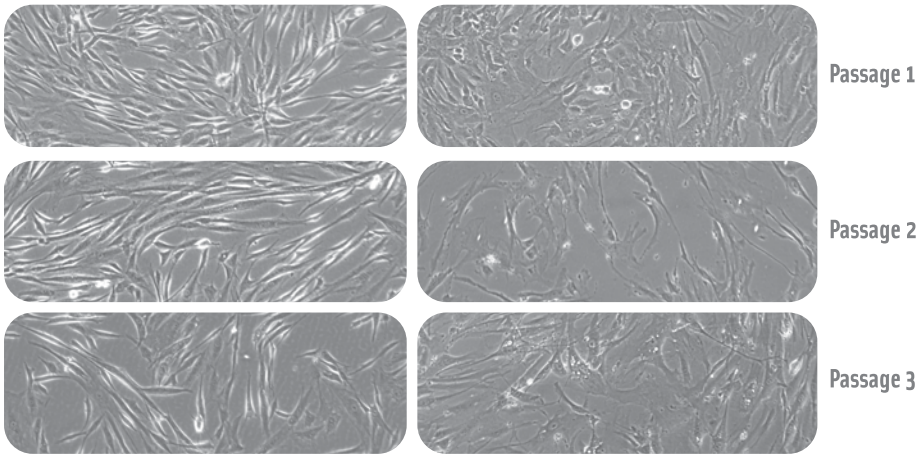

Figure 1
Phenotypic morphology of human bone marrow-derived MSCs after prolonged passaging in PRIME-XV® MSC Expansion SFM, as compared to control, 15% serum-containing medium. Images were taken at 10X magnification.

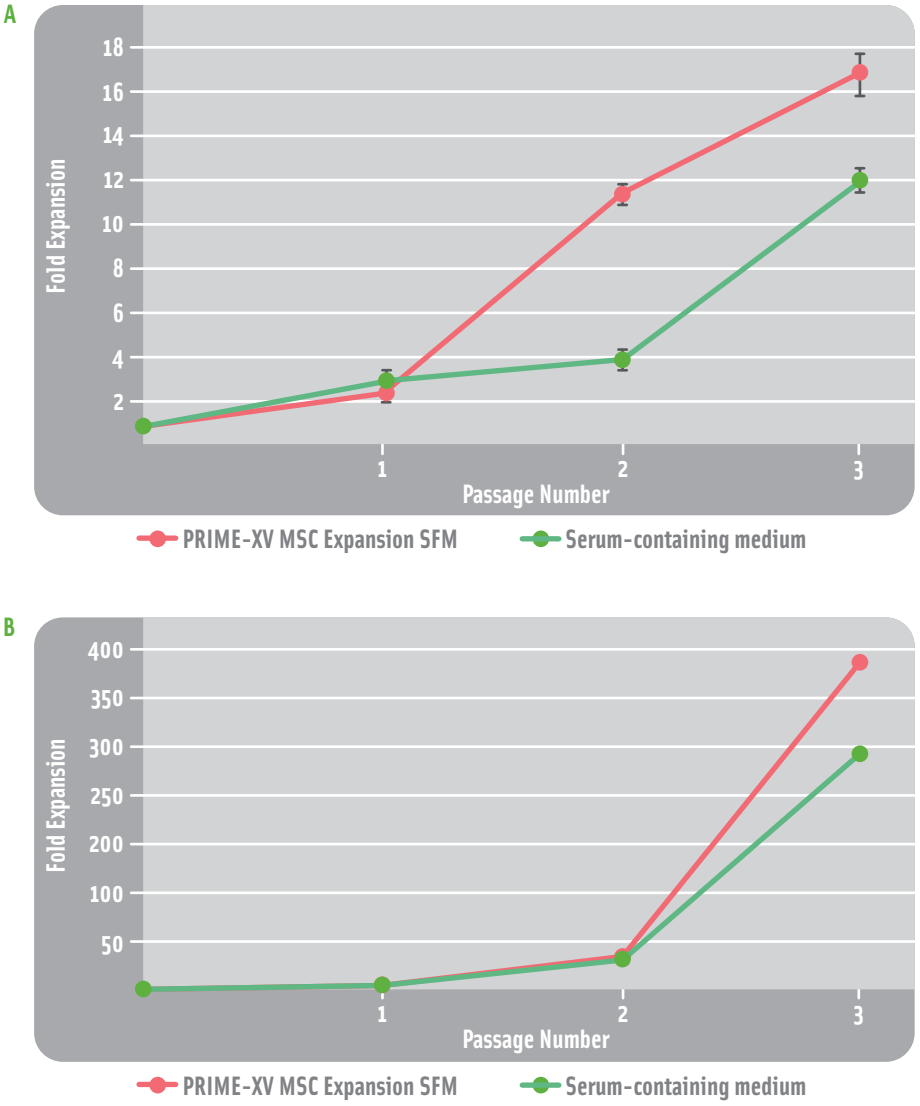

Figure 2
Human bone marrow-derived MSCs (A) and adipose-derived MSCs (B) grown in PRIME-XV MSC Expansion SFM showed an efficient increase in cell expansion above the control, 15% serum-containing medium, over three passages. Fold increase was calculated as the ratio of final viable cell count by the initial seeded viable cell count at passage 1. Standard deviation was calculated as the square root of the variance among replicates.

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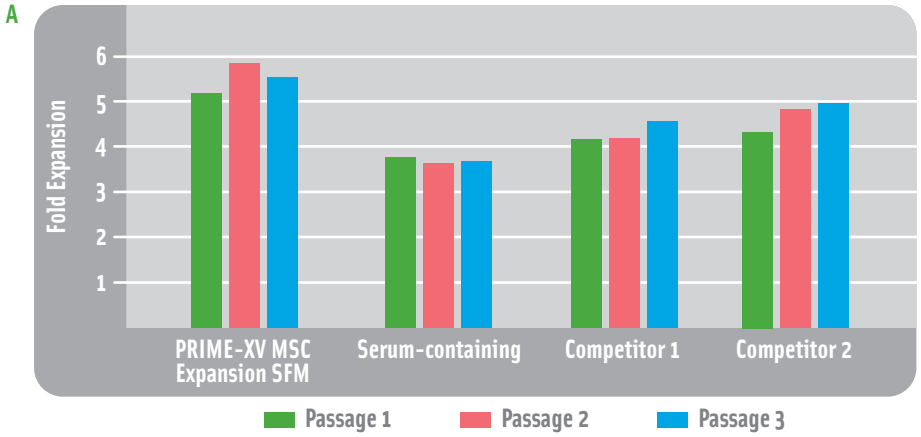

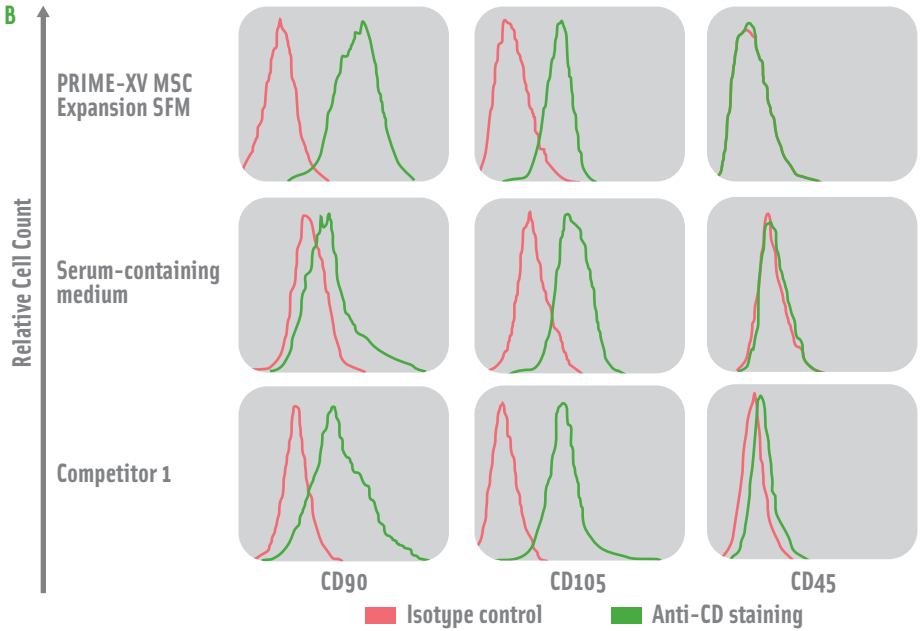

Figure 3

PRIME-XV MSC Expansion SFM supported maximal human MSC expansion compared to leading competitors' media containing 10% serum (A). Flow cytometry analysis of human bone marrow-derived MSCs propagated in PRIME-XV MSC Expansion SFM were positive for CD90 and CD105 cell surface markers but lacked CD45 expression (B).

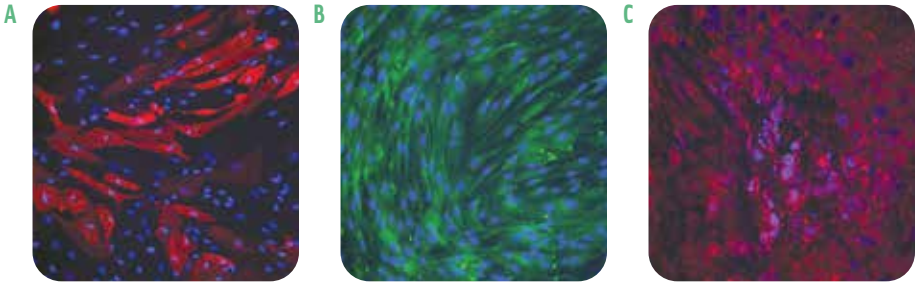

Figure 4

Multi-lineage differentiation potential was retained in human bone marrow-derived MSCs cultured in PRIME-XV MSC Expansion SFM. Immunofluorescence analysis of FABP-4 (A), OSTEOCALCIN (B) and AGGRECAN (C) represent the adipogenic, osteogenic and chrondrogenic lineages, respectively. Nuclei were counterstained with DAPI (blue).

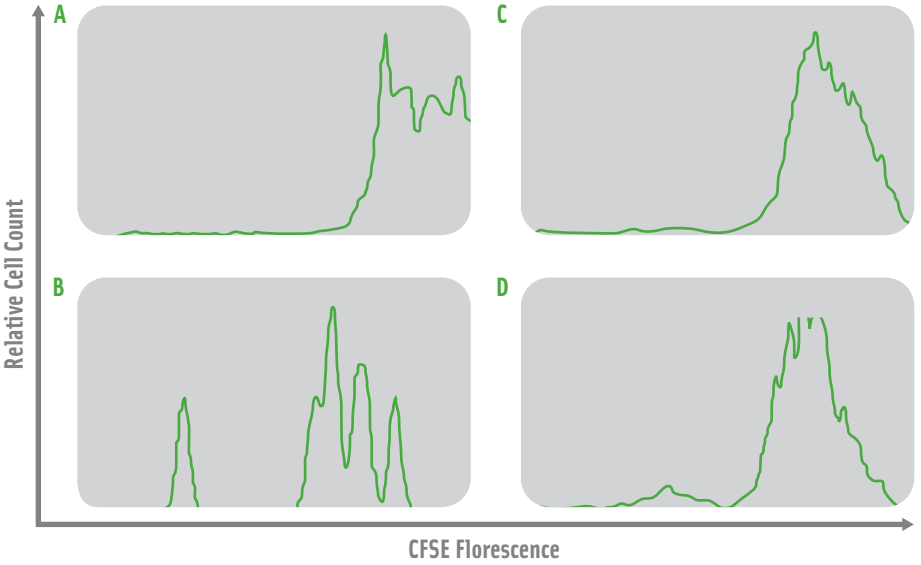

Figure 5

Immunosuppressive potential of human bone marrow-derived MSCs expanded in PRIME-XV MSC Expansion SFM. Cell proliferation assay was performed using CFSE-labeled human peripheral blood mononuclear cell (PBMC) derived $CD3^+$ cells stimulated with phytohemagglutinin. Non-activated $CD3^+$cells without MSC co-culture were arrested at the parent generation (A). Activated $CD3^+$ cells proliferated for 3 days without MSC co-culture (B). Proliferation of $CD3^+$ cells stimulated with phytohemagglutinin was suppressed when co-cultured with MSCs expanded in PRIME-XV MSC Expansion SFM (C) or cultured with MSCs expanded in serum-containing medium (D).

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