PRIME-XV Hematopoietic Cell Basal XSFM

Catalog #	Product	Size
91211	PRIME-XV Hematopoietic Cell Basal XSFM	500 mL liquid Additional package sizes are available at request.

Intended Use

For research or further manufacturing use only.

Product Description

PRIME-XV Hematopoietic Cell Basal XSFM is an optimized xeno- and serum free media recommended for use in the expansion of human hematopoietic cells, including hematopoietic progenitor cells. The performance of this medium was assessed on hematopoietic stem/progenitor cells derived from cord blood. PRIME-XV Hematopoietic Cell Basal XSFM is intended to be used with cytokine supplements for the ex vivo culture of hematopoietic progenitor cells. The cytokine cocktail used depends on the experimental requirements of each user.

Quality Assurance

All quality control test results are reported on a lot specific Certificate of Analysis which is available upon request.

Storage Instructions and Stability

Handle using aseptic techniques to avoid contamination. PRIME-XV Hematopoietic Cell Basal should be stored at 2-8˚C and protected from light until ready to use. It is stable at 2-8˚C, under original packaging, for 1 year. Once opened, the product can be stored at 2-8˚C in the dark and used within 4 weeks. This product should not be used after the assigned expiration date. Not validated for use beyond the unopened expiry shelf life. Please refer to the Safety Data Sheet for information regarding hazards and safe handling practices.

Precautions

This product is for research use or further manufacturing use only. Not for injection or diagnostic procedures. The safety and efficacy of this product in diagnostic or other clinical uses has not been established. This reagent should not be used beyond twelve months indicated in the storage instructions. Please refer to the Safety Data Sheet for information regarding hazards and safe handling practices.

Directions for Use

The following protocol is optimized for the expansion of isolated human hematopoietic stem/progenitor cells with PRIME-XV Hematopoietic Cell Basal XSFM. PRIME-XV Hematopoietic Cell Basal XSFM does not contain L-glutamine. Prior to use add L –glutamine to a final concentration of 2 mM (PN# 9317, 200 mM stock solution).

Protocol for Hematopoietic Stem/Progenitor Cell Expansion

1. Equilibrate sufficient amount of PRIME-XV Hematopoietic Cell Basal XSFM at 37˚C for at least 15 minutes before using.
   Note: To avoid temperature cycling, determine the total volume needed before equilibration.
2. Thaw a frozen vial of cells by gently stirring the vial in a 37˚C water bath for 1 minute. Alternatively use freshly isolated or harvested cells.
3. Carefully transfer entire content of the vial into a 15 mL conical tube containing 10 mL of PRIME-XV Hematopoietic Cell Basal XSFM.
4. Spin cells down at 200 g for 10 minutes.
5. Carefully aspirate supernatant leaving a minimum volume of media covering the cell pellet.
6. Supplement appropriate volume of PRIME-XV Hematopoietic Cell Basal XSFM with cytokines, as indicated in the table below.
7. Resuspend cell pellet with the cytokine supplemented PRIME-XV Hematopoietic Cell Basal XSFM and then transfer cells onto a plate at a density of 10,000 cells/mL.
8. Incubate cells in an incubator at 37˚C and 5% CO_2.
9. Feed cells with cytokine supplemented PRIME-XV Hematopoietic Cell Basal XSFM every 2-3 days of culture, or when cells reach a density of 1-1.5x10^6 cells/ml. Volume amount of feed should be 70% of the original culture volume.

Cytokine	Concentration used	FISI # (or equivalent)
Recombinant Human FLT-3 Ligand ACF	100 ng/mL	95120
Recombinant Human SCF ACF	100 ng/mL	95115
Recombinant Human IL-3 ACF	100 ng/mL	95113
Recombinant Human IL-6 ACF	100 ng/ Ml	95121
Recombinant Human TPO ACF	100 ng/ mL	95110

Data

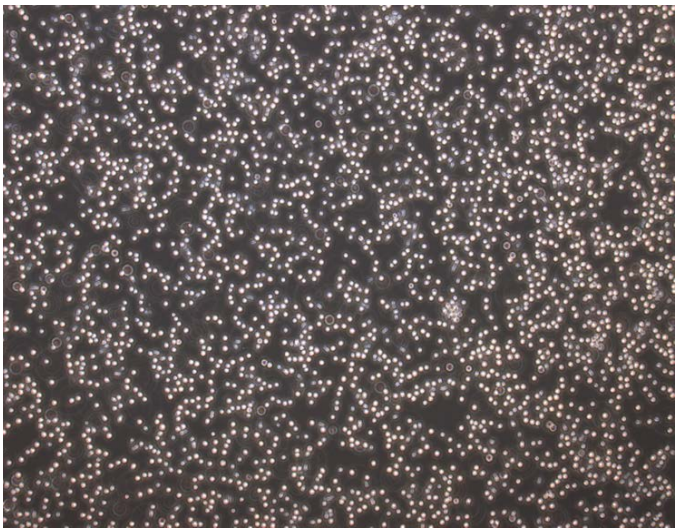
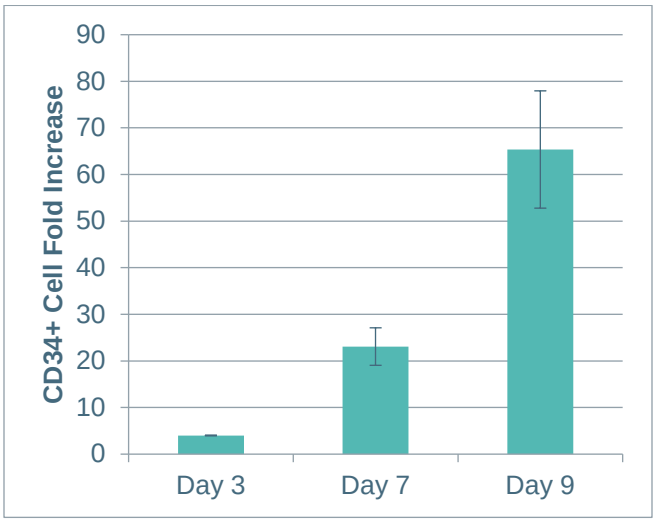


Figure 1. PRIME-XV Hematopoietic Cell Basal XSFM maintains the characteristic morphology of hematopoietic progenitor cells. Freshly isolated cord blood derived $CD34^+$ cells were cultured for seven days in PRIME-XV Hematopoietic Cell Basal XSFM supplemented with FLT-3, SCF, IL-3, IL-6 and TPO. The cells were plated at 10,000 cells/mL in plastic plates. (10x magnification).

A



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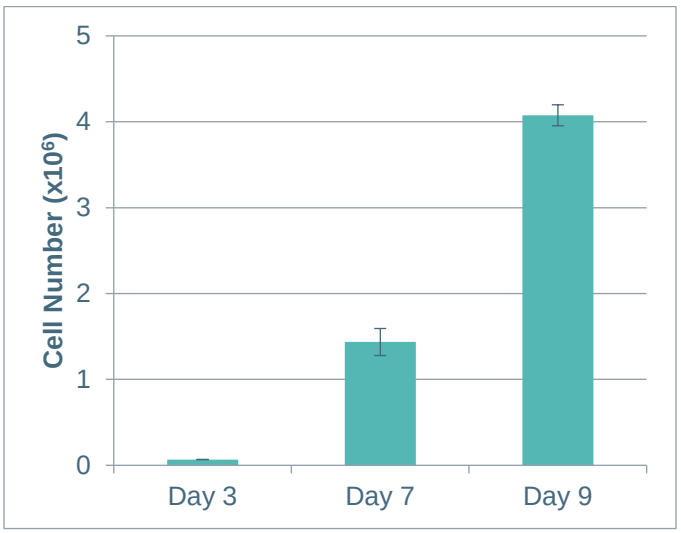


Figure 2. Expansion profile of hematopoietic progenitor cells in PRIME-XV Hematopoietic Cell Basal XSFM. $CD34^+$ cells, derived from cord blood, were cultured for 9 days in PRIME-XV Hematopoietic Cell Basal XSFM supplemented with FLT-3, SCF, IL-3, IL-6 and TPO. Fresh media supplemented with the appropriate cytokine cocktail was added to each well every 2-3 days. At day 3, 7 and 9 CD34 fold increase (A) and TNC (B) were quantified.

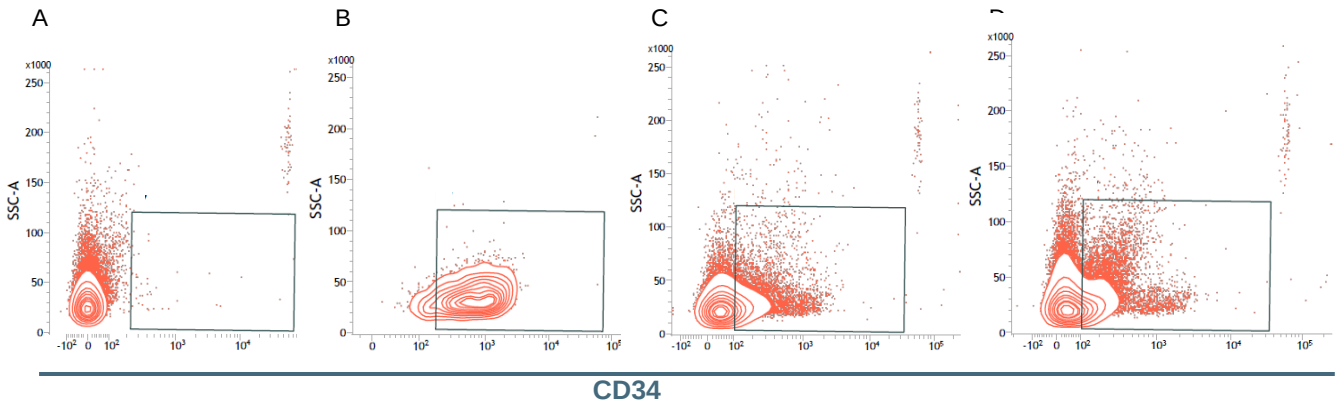
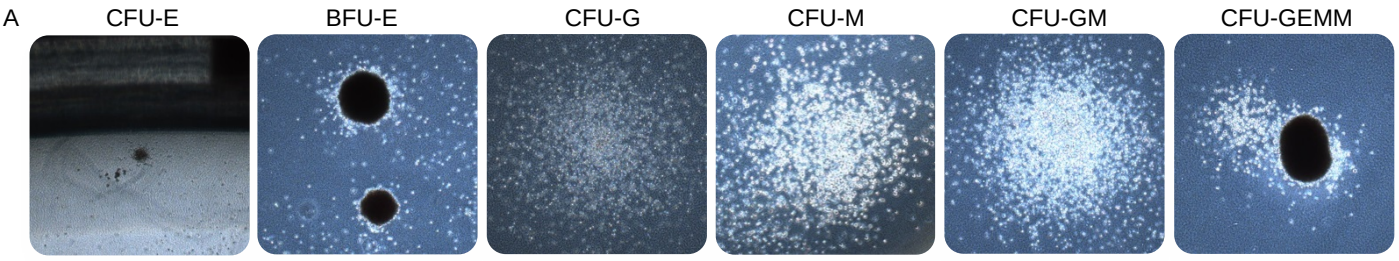


Figure 3. Flow Cytometry analysis of hematopoietic progenitor cells grown in PRIME-XV Hematopoietic Cell Basal XSFM. CD34$^+$ cells, derived from cord blood, were cultured for up to 9 days. Flow cytometry analysis for CD34 was performed. Specific IgG was used as negative control (A), and cells were analyzed at day 3 (B), day 7 (C) and day 9 (D).



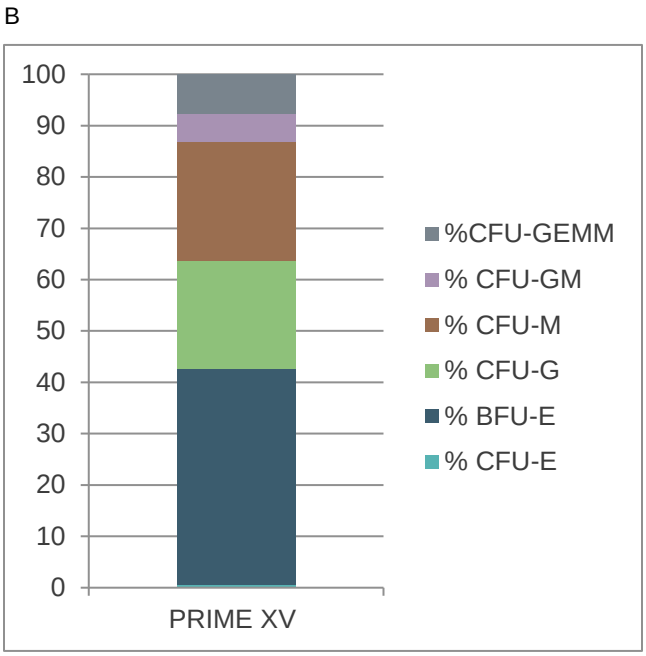


Figure 4. PRIME-XV Hematopoietic Cell Basal XSFM maintains the multi-lineage potential of human hematopoietic progenitor cells. CD34$^+$ cells derived from cord blood were cultured for 5 days in PRIME-XV Hematopoietic Cell Basal XSFM supplemented with FLT-3, SCF, IL-6, IL-3 and TPO. The cells were subsequently cultured for 14 days to assess their colony forming potential. (A) Representative images of CFU-E, BFU-E, CFU-G, CFU-M, CFU-GM and CFU-GEMM formed from the CFC (Colony Forming Cell assay). (B) Distribution of colonies formed in the CFC.

Related Products

Catalog #	Product	Size
9317	L-Glutamine Solution (200mM)	100 mL, 500 mL
9240	1X PBS, Dulbecco's Phosphate Buffered Saline	100 mL, 500 mL, 1 L
95120	Recombinant Human FLT-3 Ligand ACF	10 µg
95115	Recombinant Human SCF ACF	10 µg
95113	Recombinant Human IL-3 ACF	10 µg
95121	Recombinant Human IL-6 ACF	20 µg
95110	Recombinant Human TPO ACF	10 µg

Technical Support

CONTACT US

For more information or assistance contact Customer Service at:

- Email: fisitmrequest@fujifilm.com
- Direct line: +1 800 577 6097

WEBSITE RESOURCES

Visit the website at www.irvinesci.com for technical resources and information including:

- Safety Data Sheets (SDS)
- Certificate of Analysis (CoA) (when available)
- FAQs
- Product literature
- Complete list of offices and contact information by country

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