StemSpan™ SFEM II

Serum-Free Medium for Expansion of Hematopoietic Cells

Catalog #	09605	100 mL
	09655	500 mL

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Product Description

StemSpan™ Serum-Free Expansion Medium II (SFEM II) is a modified version of StemSpan™ SFEM. It has been developed for the in vitro culture and expansion of human hematopoietic cells. This medium contains pre-tested bovine serum albumin, insulin, transferrin and other supplements in Iscove's MDM. Recombinant hematopoietic growth factors, required for the optimal growth and expansion of hematopoietic cells, have not been added to StemSpan™ SFEM II. This allows users the flexibility to prepare medium that meets their requirements.

Using appropriate cytokines (e.g. StemSpan™ CC100, StemSpan™ CC110, or StemSpan™ CD34+ Expansion Supplement; See Notes and Tips), StemSpan™ SFEM II can be used for the expansion of total nucleated cells and CD34+ cells from cord blood, bone marrow, or other cell sources. StemSpan™ SFEM II can also be used to expand and differentiate lineage-committed progenitors to generate pure populations of erythroblasts and megakaryocytes when used with the StemSpan™ Erythroid Expansion Supplement (Catalog #02692) or the StemSpan™ Megakaryocyte Expansion Supplement (Catalog #02696).

Properties

Storage: Store at -20°C.

Shelf Life: Stable for 12 months from date of manufacture (MFG) on label.

Contains:
- Bovine serum albumin
- Insulin, Human, Recombinant
- Transferrin, Human (Iron-Saturated)
- 2-Mercaptoethanol
- Iscove's MDM
- Supplements

Donors have been tested and found negative for hepatitis B surface antigen (HBsAg) and HIV-1 antibodies and/or HIV-1 antigen. However, this product should be considered potentially infectious and treated in accordance with universal handling precautions.

Handling / Directions For Use

1. Thaw StemSpan™ SFEM II at room temperature (15 - 25°C) or overnight at 2 - 8°C. Mix well.
   NOTE: If not used immediately, aliquot into tubes and store at -20°C. Once aliquots are thawed, do not re-freeze.
2. Add desired cytokines, growth factors, and other components to StemSpan™ SFEM II and mix well.
   NOTE: Added components and cells in sterile cell culture medium (e.g. Iscove's MDM or DMEM) should not exceed ~10% of total volume.
3. Add cells, mix well, and set up cultures as desired.

NOTE: Addition of lipids is not recommended.

Notes and Tips

Selection of an optimal growth factor combination is dependent upon the source and type of cells and the experimental objectives of the researcher. StemSpan™ expansion supplements, described below, are suitable for use with StemSpan™ SFEM II.

- StemSpan™ Erythroid Expansion Supplement (100X) (Catalog #02692)
  -Expansion and differentiation of human erythroid progenitor cells
  -Contains: rh SCF, rh IL-3, rh EPO

- StemSpan™ CD34+ Expansion Supplement (10X) (Catalog #02691)
  -Culture and expansion of CD34+ progenitor cells
  -Contains: rh SCF, rh TPO, rh IL-3, rh IL-6, rh Flt3 ligand, other additives

- StemSpan™ Megakaryocyte Expansion Supplement (100X) (Catalog #02696)
  - Culture and expansion of human megakaryocyte progenitors and megakaryocytes
  - Contains: rh SCF, rh TPO, rh IL-6, rh IL-9

- StemSpan™ CC100 (Catalog #02690)
  - Culture and expansion of human hematopoietic cells including CD34+ cells, stem cells and progenitor cells
  - Contains: rh Flt3 ligand, rh SCF, rh IL-3, rh IL-6

- StemSpan™ CC110 (Catalog #02697)
  - Culture and expansion of human hematopoietic cells including CD34+ cells, stem cells and progenitor cells
  - Contains: rh Flt3 ligand, rh SCF, rh TPO

SCF = Stem Cell Factor; EPO = Erythropoietin; TPO = Thrombopoietin; rh = recombinant human; IL = interleukin; Flt = fms-like tyrosine kinase