

StemSpan™ SFEM



Serum-Free Medium for Expansion of Hematopoietic Cells

Catalog # 09600 100 mL
09650 500 mL

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Product Description

StemSpan™ Serum-Free Expansion Medium (SFEM) has been developed for the in vitro culture and expansion of human hematopoietic cells. This medium contains pre-tested bovine serum albumin, insulin and transferrin, and 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. This allows users the flexibility to prepare medium that meets their requirements.

In addition to the culture and expansion of human hematopoietic cells, StemSpan™ SFEM has been used for the culture and expansion of hematopoietic stem and progenitor cells from other species, including mouse, non-human primate and dog. StemSpan™ SFEM has also been used for the generation, culture and assay of human and mouse dendritic cells, and for the culture of various other hematopoietic and non-hematopoietic cell types. In most applications, addition of specific hematopoietic growth factors, cytokines and/or other compounds is required for optimal growth.

Properties

- Storage:** Store at -20°C.
- Shelf Life:** Stable until expiry date (EXP) on label.
- Contains:**
- Bovine Serum Albumin
 - Recombinant Human Insulin
 - Human Transferrin (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 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 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.

Notes and Tips

STEMCELL Technologies Inc. recommends the use of Human LDL (Catalog #02698) as a culture supplement. It has been prescreened for the culture, expansion, and colony assay of human hematopoietic and non-hematopoietic cells in serum-free culture media. It promotes the proliferation and survival of human hematopoietic and other progenitor cells in culture, resulting in increased cell output in expansion cultures and increased colony numbers and/or colony size in colony assays.

Selection of an optimal cytokine 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.

- 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

References

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