

# StemSpan™-XF

**Xeno-free and serum-free medium for culture and expansion of human hematopoietic cells**

Catalog #100-0073      500 mL



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## Product Description

StemSpan™-XF has been developed for the in vitro culture and expansion of human hematopoietic cells, when the appropriate growth factors and supplements are added. This allows users the flexibility to prepare medium that meets their requirements. StemSpan™-XF contains pre-tested human-derived and recombinant human proteins.

Using appropriate StemSpan™ Expansion Supplements, StemSpan™-XF may be used to expand CD34+ cells isolated from human cord blood, mobilized peripheral blood, or bone marrow samples, or to expand and differentiate lineage-committed progenitor cells to generate populations of erythroid, myeloid, or megakaryocyte progenitor cells.

## Properties

**Storage:** Store at -20°C.

**Shelf Life:** Stable until expiry date (EXP) on label.

**Contains:** This product contains only human-derived or recombinant human proteins.

This product contains material derived from human plasma. 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.

## Directions for Use

### PREPARATION OF COMPLETE MEDIUM

1. Thaw StemSpan™-XF at room temperature (15 - 25°C) or overnight at 2 - 8°C. Mix thoroughly.

NOTE: If not used immediately, aliquot into tubes and store at -20°C. After thawing aliquots, do not re-freeze.

2. Add desired cytokines, growth factors, and other components to StemSpan™-XF. Mix thoroughly.

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 thoroughly, and set up cultures as desired.

### RECOMMENDED PROTOCOL FOR CD34+ CELL EXPANSION

For complete instructions for CD34+ cell expansion using StemSpan™ media and StemSpan™ CD34+ Expansion Supplement (10X; Catalog #02691), refer to the Product Information Sheet for the supplement, available at [www.stemcell.com](http://www.stemcell.com) or contact us to request a copy.

For a complete list of expansion supplements for use with StemSpan™-XF, see Notes and Tips.

### ASSESSMENT OF HEMATOPOIETIC CELLS

Assessment of CD34+ cells before and after culture may be performed by flow cytometry using the following fluorochrome-conjugated antibody clones:

- Anti-Human CD34 Antibody, Clone 581 (Catalog #60013) or Clone 563 (Catalog #60119) or Clone 8G12 (Catalog #60121)
- Anti-Human CD45 Antibody, Clone HI30 (Catalog #60018) or Clone 2D1 (Catalog #60123)

## 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™-XF.

- StemSpan™ CD34+ Expansion Supplement (10X) (Catalog #02691)
  - Culture and expansion of large numbers of human CD34+ progenitor cells
  - Contains: rh SCF, rh TPO, rh IL-3, rh IL-6, rh Flt3 ligand, other additives
- StemSpan™ CC100 (Catalog #02690)
  - Culture and expansion of human hematopoietic cells
  - Contains: rh Flt3 ligand, rh SCF, rh IL-3, rh IL-6
- StemSpan™ CC110 (Catalog #02697)
  - Culture and expansion of human hematopoietic cells
  - Contains: rh Flt3 ligand, rh SCF, rh TPO
- StemSpan™ Erythroid Expansion Supplement (100X) (Catalog #02692)
  - Expansion and lineage-specific differentiation of human CD34+ cells into erythroid progenitor cells
  - Contains: rh SCF, rh IL-3, rh EPO
- StemSpan™ Megakaryocyte Expansion Supplement (100X) (Catalog #02696)
  - Expansion and lineage-specific differentiation of human CD34+ cells into megakaryocyte progenitor cells
  - Contains: rh SCF, rh TPO, rh IL-6, rh IL-9
- StemSpan™ Myeloid Expansion Supplement (100X) (Catalog #02693)
  - Expansion and lineage-specific differentiation of human CD34+ cells into granulocytes
  - Contains: rh SCF, rh TPO, rh G-CSF, rh GM-CSF
- StemSpan™ Myeloid Expansion Supplement II (100X) (Catalog #02694)
  - Expansion and lineage-specific differentiation of human CD34+ cells into monocytes
  - Contains: rh Flt3 ligand, rh SCF, rh TPO, rh M-CSF, rh GM-CSF, other additives

SCF = stem cell factor; EPO = erythropoietin; TPO = thrombopoietin; rh = recombinant human; IL = interleukin; Flt = fms-like tyrosine kinase

### RELATED PRODUCTS

For related products, including specialized culture and storage media, supplements, antibodies, cytokines, and small molecules, visit [www.stemcell.com/HSPCworkflow](http://www.stemcell.com/HSPCworkflow) or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com). For available fresh and cryopreserved peripheral blood, cord blood, and bone marrow products in your region, visit [www.stemcell.com/primarycells](http://www.stemcell.com/primarycells).

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