

PRODUCT DESCRIPTION

StemSpan[®] H3000 has been developed for the *in vitro* culture and expansion of human hematopoietic cells. StemSpan[®] H3000 contains pre-tested human-derived and recombinant human proteins.

Recombinant cytokines, required for the optimal growth and expansion of hematopoietic cells, have not been added to StemSpan[®] H3000 medium. This allows users the flexibility to prepare medium that meets their requirements.

COMPONENTS

StemSpan[®] H3000 contains only human-derived or recombinant human proteins.

StemSpan[®] H3000 media are aseptically manufactured using tightly controlled processes and extensively prescreened components.

Each batch of StemSpan[®] H3000 is sterility tested and Quality Control performance tested. A Certificate of Analysis is available upon request.

This proprietary formulation contains components derived from human plasma. Venous blood from each donor has been tested 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.

STABILITY AND STORAGE

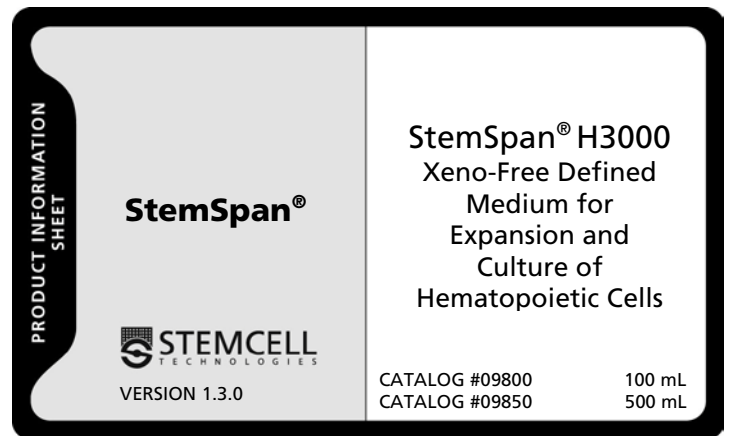
Product stable at -20°C (-25° to -15°C) until expiry date indicated on label. Stable for one month if stored at 2 - 8°C.

It is recommended that StemSpan[®] H3000 be thawed under refrigeration (2 - 8°C) or at room temperature (15 - 25°C), mixed well and aliquoted into smaller volumes. These aliquots should be stored at -20°C (-25° to -15°C) until use.

DIRECTIONS FOR USE

StemSpan[®] H3000 is a serum-free medium formulated for the *in vitro* culture of hematopoietic progenitor cells. Cytokines and other growth factors have not been added. Addition of cytokines or other growth factors is required for the optimal growth of hematopoietic cells.

1. Thaw StemSpan[®] H3000 and mix well. Working aliquots can be dispensed into sterile tubes or bottles, capped tightly and stored at -20°C (-25° to -15°C) until use.
2. Aseptically add desired cytokines, growth factors and other components to StemSpan[®] H3000 and mix well. Add cells, mix well, dispense into sterile cultureware and incubate. Added components and cells in sterile cell culture medium (e.g. Iscove's MDM or DMEM) should not exceed ~10% of total volume.



NOTES

Selection of an optimal cytokine combination is dependent upon the source and type of cells and the experimental objectives of the researcher. StemSpan[®] Cytokine Cocktails (CC) are suitable for use with StemSpan[®] H3000.

StemSpan [®] Cytokine Cocktail	Recommended For	Contains
StemSpan [®] CC100 Catalog #02690	Culture and expansion of human hematopoietic cells including CD34 ⁺ cells, stem cells and progenitor cells	<ul style="list-style-type: none">• rh Flt-3 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	<ul style="list-style-type: none">• rh Flt-3 ligand• rh SCF• rh TPO
StemSpan [®] CC220 Catalog #02696	Culture and expansion of human megakaryocyte progenitors and megakaryocytes	<ul style="list-style-type: none">• rh SCF• rh TPO• rh IL-6• rh IL-9

SCF = Stem Cell Factor; TPO = Thrombopoietin; IL = Interleukin; rh = recombinant human

STEMCELL Technologies 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.

SELECTED PUBLICATIONS

1. Giebel B, Corbeil D, Beckmann J, Hohn J, Freund D, Giesen K, Fischer J, Kogler G, Wernet P: Segregation of lipid raft markers including CD133 in polarized human hematopoietic stem and progenitor cells. *Blood* 104: 2332-2338, 2004
2. Irish JM, Anensen N, Hovland R, Skavland J, Borrensens-Dale A-L, Bruserud O, Nolan GP, Gjertsen BT: Flt-3 Y591 duplication and Bcl-2 overexpression are detected in acute myeloid leukemia cells with high levels of phosphorylated wild-type p53. *Blood* 109: 2589-2596, 2007
3. Irish JM, Hovland R, Krutzik PO, Perez OD, Bruserud O, Gjertsen BT, Nolan GP: Single cell profiling of potentiated phospho-protein networks in cancer cells. *Cell* 118: 217-228, 2004
4. Miharada K, Hiroyama T, Sudo K, Nagasawa T, Nakamura Y: Efficient enucleation of erythroblasts differentiated *in vitro* from hematopoietic stem and progenitor cells. *Nat Biotechnol* 24: 1255-1256, 2006