

MethoCult™ SF H4636

Serum-free methylcellulose-based medium with recombinant cytokines for human ES and iPS cell-derived cells

Catalog # 04636 100 mL



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Product Description

Complete Serum-Free Methylcellulose-Based Medium for Colony-Forming Unit (CFU) Assays for Human ES and iPS Cell-Derived Hematopoietic Cells

MethoCult™ SF H4636 is recommended for the culture of human embryonic stem (ES) cell-derived and induced pluripotent stem (iPS) cell-derived hematopoietic progenitor cells in defined serum-free conditions. MethoCult™ SF H4636 is formulated to support optimal growth of erythroid progenitor cells (CFU-E and BFU-E), granulocyte-macrophage progenitor cells (CFU-GM, CFU-G, CFU-M), and multipotential progenitor cells (CFU-GEMM; granulocyte, erythrocyte, macrophage, megakaryocyte).

MethoCult™ SF H4636 is also recommended for CFU assays with mononuclear cells, CD34+ enriched cells, and cells isolated by other purification methods from human bone marrow (BM), mobilized peripheral blood (MPB), peripheral blood (PB), and cord blood (CB) samples.

Properties

- Storage:** Store at -20°C.
- Shelf Life:** Stable until expiry date (EXP) on label.
- Contains:**
- Methylcellulose in Iscove's IMDM
 - Bovine serum albumin
 - 2-Mercaptoethanol
 - Recombinant human insulin
 - Human transferrin (iron-saturated)
 - Cytokines including recombinant human erythropoietin (EPO)
 - Supplements

This product contains material derived from human plasma. Donors have been tested and found negative for HIV-1 and -2, hepatitis B, and hepatitis C prior to donation. However, this product should be considered potentially infectious and treated in accordance with universal handling precautions.

Handling / Directions For Use

NOTE: If product is received partially thawed, place immediately at -20°C or thaw and aliquot as described below. Do not use MethoCult™ past the expiry date as indicated on the label.

NOTE: Do not use pipettes to dispense methylcellulose as the volume dispensed will not be accurate. Syringes and large bore blunt-end needles should be used for accurate dispensing of viscous methylcellulose medium and to prevent needle-stick injuries.

1. Thaw 100 mL bottle of MethoCult™ SF H4636 at room temperature (15 - 25°C) or overnight at 2 - 8°C. Do not thaw MethoCult™ at 37°C.
2. Shake vigorously for 1 - 2 minutes and then let stand for at least 5 minutes to allow bubbles to rise to the top before aliquoting.
3. Using a 3 or 6 mL luer lock syringe attached to a 16 gauge Blunt-End Needle (Catalog #28110), aliquot 3 mL per tube for 1.1 mL duplicate cultures or 4 mL per tube for 1.1 mL triplicate cultures. Tubes can be used immediately, stored at 2 - 8°C for up to 1 month, or stored at -20°C. After thawing aliquoted tubes of MethoCult™, mix well and use immediately. Do not re-freeze.

NOTE: Optimal cell plating concentrations for ES and iPS cell-derived hematopoietic progenitor cells are dependent on the cell line and differentiation conditions. Plate cells at 2 or 3 different cell concentrations (e.g. between 2,000 and 20,000 viable cells per 35 mm dish) to ensure that optimal colony numbers are obtained.

For recommended plating concentrations of cells isolated from BM, CB, MPB, or PB, setup of human CFU assays, and counting and classification of human colonies, refer to the Technical Manual: Human Colony-Forming Unit Assays Using MethoCult™ (Document #28404), available at www.stemcell.com or contact us to request a copy.

References

- Atlas of Hematopoietic Colonies from Cord Blood. (2010). Vancouver: STEMCELL Technologies Inc. (Catalog #29940)
- Eaves CJ & Eaves AC. (2006) Anatomy and physiology of hematopoiesis. In: Pui CH (Ed.). Childhood Leukemia, Second Edition (pp.69–105). Cambridge: Cambridge University Press.
- Eaves C & Lambie K. (1995) Atlas of Human Hematopoietic Colonies. Vancouver: STEMCELL Technologies Inc. (Catalog #28700)
- Nissen-Druey C et al. (2005) Human hematopoietic colonies in health and disease. Basel, Switzerland: S. Karger Medical and Scientific Publishers. (Catalog #28760)
- Wognum B et al. (2013) Colony forming cell assays for human hematopoietic progenitor cells. In: Helgason CD & Miller CL (Eds.). Basic Cell Culture Protocols (pp. 267–83). Clifton, New Jersey: Humana Press Inc.

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