MethoCult™ H4034 Optimum

Methylcellulose-based medium with recombinant cytokines for human cells

Catalog #	04044	24 x 3 mL
	04034	100 mL

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Product Description

Complete Methylcellulose-Based Medium for Colony-Forming Unit (CFU) Assays for Human Cells

MethoCult™ H4034 Optimum (MethoCult™ GF H4034) is optimized for the detection and quantification of human hematopoietic progenitor cells in bone marrow, mobilized peripheral blood, peripheral blood, and cord blood samples using CFU assays. It is suitable for use with CD34+ enriched cells, mononuclear cells, and cells isolated by other purification methods.

MethoCult™ H4034 Optimum 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 granulocyte, erythroid, macrophage, megakaryocyte progenitor cells (CFU-GEMM).

Properties

Storage: Store at -20°C.

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

Contains:
- Methylcellulose in Iscove's MDM
- Fetal bovine serum
- Bovine serum albumin
- 2-Mercaptoethanol
- Recombinant human stem cell factor (SCF)
- Recombinant human interleukin 3 (IL-3)
- Recombinant human erythropoietin (EPO)
- Recombinant human granulocyte colony-stimulating factor (G-CSF)
- Recombinant human granulocyte-macrophage colony-stimulating factor (GM-CSF)
- Supplements

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.

A. TO PREPARE 100 ML BOTTLE (Catalog #04034)

1. Thaw 100 mL bottle of MethoCult™ 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 luer lock syringe (3 mL [Catalog #28230] or 6 mL) attached to a 16 gauge Blunt-End Needle (Catalog #28110), aliquot as follows:
   - 3 mL per tube for 1.1 mL duplicate cultures
   - 4 mL per tube for 1.1 mL triplicate cultures

   NOTE: 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.

B. TO PREPARE 3 ML TUBES (Catalog #04044)
1. Thaw 3 mL tubes of MethoCult™ at room temperature (15 - 25°C) or overnight at 2 - 8°C. Do not thaw MethoCult™ at 37°C. Mix thoroughly.
NOTE: After thawing tubes of MethoCult™, use immediately or store at 2 - 8°C for up to 1 month. Do not re-freeze.

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

Notes and Tips

RELATED PRODUCTS
For related products, including specialized culture and storage media, supplements, antibodies, cytokines, and small molecules, visit www.stemcell.com/HSPCworkflow or contact us at techsupport@stemcell.com. For available fresh and cryopreserved peripheral blood, cord blood, and bone marrow products, visit www.stemcell.com/primarycells.

References

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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.