

# MethoCult™ H4431



## Methylcellulose-Based Medium with Agar-LCM and EPO for Human Cells

Catalog # 04431

100 mL

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## Product Description

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

MethoCult™ H4431 is formulated for the detection and quantification of human hematopoietic progenitor cells in bone marrow (BM) and peripheral blood (PB) samples using CFU assays. It is also suitable for detection of progenitor cells in mobilized peripheral blood (MPB) and cord blood (CB) samples, and suitable for use with CD34+ enriched cells, mononuclear cells, and cells isolated by other purification methods.

MethoCult™ H4431 is formulated to support the 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). MethoCult™ H4431 contains Agar Leukocyte Conditioned Medium (Agar-LCM) as a source of colony-stimulating factors, plus recombinant human erythropoietin (EPO). It is suitable for use as a control medium for detection of "EPO-independent" erythroid progenitor cells using MethoCult™ H4531 (Catalog #04531).

## Properties

Storage:	Store at -20°C.
Shelf Life:	Stable until expiry date (EXP) on label.
Contains:	<ul style="list-style-type: none"><li>• Methylcellulose in Iscove's MDM</li><li>• Fetal bovine serum</li><li>• Bovine serum albumin</li><li>• 2-Mercaptoethanol</li><li>• Agar Leukocyte Conditioned Medium (Agar-LCM)</li><li>• Recombinant human erythropoietin (EPO)</li><li>• Supplements</li></ul>

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.

### THAWING AND DISPENSING BOTTLES

1. Thaw 100 mL bottle of MethoCult™ H4431 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.

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 Assays Using MethoCult™ (Document #28404), available on our website at [www.stemcell.com](http://www.stemcell.com) or contact us to request a copy.

## References

- 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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