

MethoCult™ SF M3236

Serum-free methylcellulose-based medium without cytokines for mouse cells

Catalog #03236

80 mL



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Product Description

Base Methylcellulose Medium for Colony-Forming Unit (CFU) Assays for Mouse Cells

MethoCult™ M3236 is recommended as a base for the preparation of methylcellulose-based medium for the culture of mouse progenitor cells in defined serum-free conditions.

This incomplete medium formulation contains components that have been selected for optimal growth of mouse hematopoietic CFUs. It is suitable for detection of erythroid progenitor cells (BFU-E), granulocyte-macrophage progenitor cells (CFU-GM), and multipotential granulocyte, erythroid, macrophage, megakaryocyte progenitor cells (CFU-GEMM), with the addition of appropriate growth factors. MethoCult™ SF M3236 can be used for the detection and quantification of hematopoietic progenitor cells in mouse bone marrow, spleen, peripheral blood, and fetal liver samples using CFU assays, and is ideal for testing cytokine effects where the presence of fetal bovine serum is not desired.

Properties

Storage: Store at -20°C.

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

Contains:

- Methylcellulose in Iscove's MDM
- Bovine serum albumin
- Recombinant human insulin
- Human transferrin (iron-saturated)
- 2-Mercaptoethanol
- 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.

Directions for Use

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

PREPARATION OF COMPLETE MethoCult™ SF M3236 MEDIUM

MethoCult™ SF M3236 base medium does not contain erythropoietin or other cytokines; they can be added directly to the bottle or to each tube after aliquoting. Refer to Table 1 for volumes required to prepare complete MethoCult™ SF M3236 medium per bottle or per tube. The 4:1 (v:v) ratio of MethoCult™ to other components in the liquid medium (e.g. cytokines) gives the correct viscosity for optimal CFU growth and morphology.

Use sterile technique to prepare complete MethoCult™ SF M3236 medium (MethoCult™ SF M3236 base medium + desired components).

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

1. Thaw 80 mL bottle of Methocult™ SF M3236 at room temperature (15 - 25°C) or overnight at 2 - 8°C.

NOTE: Do not thaw MethoCult™ at 37°C.

2. Prepare desired growth factors, supplements and Iscove's Modified Dulbecco's Medium (IMDM; Catalog #36150) in 20 mL and add to MethoCult™ (total volume of 100 mL). 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. Complete MethoCult™ medium is now ready for use.

B. TO PREPARE INDIVIDUAL TUBES

1. Thaw 80 mL bottle of MethoCult™ SF M3236 at room temperature (15 - 25°C) or overnight at 2 - 8°C.
NOTE: 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, aliquot MethoCult™ SF M3236 base medium into tubes (see Table 1 for required volumes).
NOTE: Aliquots of MethoCult™ medium may be stored at -20°C before adding components, until expiry date as indicated on label. After thawing aliquots, add desired components and mix well.
4. Add desired growth factors, supplements, and IMDM to tubes of MethoCult™ SF M3236 (see Table 1 for required volumes).
5. Vortex tubes to mix well. Complete MethoCult™ medium is now ready for use.
6. Aliquot any remaining MethoCult™ SF M3236 base medium for duplicate or triplicate cultures (see Table 1 for required volumes), store at -20°C, then add desired components after thawing. Mix well before use.

Table 1. Volumes Required for Preparation of Complete MethoCult™ SF M3236 Medium

COMPONENT	PER BOTTLE	PER TUBE (duplicate 1.1 mL cultures)	PER TUBE (triplicate 1.1 mL cultures)
MethoCult™ SF M3236	80 mL	2.4 mL	3.2 mL
IMDM with cytokines*	20 mL	0.6 mL	0.8 mL
TOTAL VOLUME	100 mL	3 mL	4 mL

*For a complete list of available cytokines, refer to www.stemcell.com.

For recommended cell plating concentrations, setup of mouse CFU assays, and counting and classification of mouse colonies, refer to the Technical Manual: Mouse Colony-Forming Unit (CFU) Assays Using MethoCult™ (Document #10000005597), available at www.stemcell.com, or contact us to request a copy.

References

Miller CL & Lai B. (2005) Human and mouse hematopoietic colony-forming cell assays. In: Helgason CD & Miller CL (Eds.). Basic Cell Culture Protocols (pp. 71–89). Totowa, New Jersey: Humana Press Inc.

Related Products

For related products, including specialized culture and storage media, supplements, antibodies, cytokines, and small molecules, visit <https://www.stemcell.com/product-portfolios/hematopoietic-stem-and-progenitor-cell-research/expansion-and-differentiation.html>, or contact us at techsupport@stemcell.com.

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