

bioGenous™ T-Cell Expansion Medium (Serum-Free)

Catalog: SFM-T001

Product Description

The bioGenous™ T-Cell Expansion Medium (Serum-Free) is a specially designed medium intended for the in vitro culture and efficient expansion of human T lymphocytes without the need for serum. This serum-free medium contains all the necessary nutrients for T cell growth, supporting the expansion of T cells from peripheral blood mononuclear cells (PBMCs) and is also suitable for the activation and expansion culture of T cells. The expanded T cells are suitable for various in vitro studies, including T cell or T cell-tumor organoid co-culture experiments used for drug activity testing and screening.

Product Information

Component	Component Cat#	Volume	Storage & Stability
bioGenous™ T-cell Basal Medium (Serum-free)	SFM-T001-A100/A500	100 mL/500 mL	2-8°C, 12 months
bioGenous™ T-cell Activator B (Serum-free) (200x)	SFM-T001-B100/B500	0.5 mL/2.5 mL	-20°C, avoid repeated freeze-thaw cycles, 12 months

Materials & Reagents Required But Not Included

The following extended materials and reagents required for organoid maintenance can be purchased from www.biogenous.cn.

Vender	Materials	Catalog#
bioGenous™	Organoid Cryopreservation Medium (Serum Free)	E238023
	Fetal Bovine Serum (FBS)	
	DPBS (1x), liquid, contains no calcium or magnesium	

Safety Precautions

Always follow standard laboratory safety procedures when handling biological materials. Wear appropriate personal protective equipment (PPE), including gloves, lab coat, and eye protection. Dispose of waste materials according to local regulations.

Preparation Before Use

Before initiating the protocol, ensure that all components and equipment are properly prepared:

1. Verify that all components are stored according to the guidelines provided in the manual. Avoid repeated freeze-thaw cycles for sensitive reagents. Thaw all necessary media and reagents according to the instructions. Keep on ice or at the recommended temperature until ready to use.
2. Ensure that all equipment, such as incubators, pipettes, and centrifuges, are calibrated and functioning correctly.

Preparation of T cell expansion culture

Reconstitute the T cell Expansion Medium under aseptic conditions. Depending on the experimental requirement, the protocol may be optimized accordingly. The following example outlines the preparation of a 10mL complete medium.

bioGenous™ T Cell Expansion Medium



A: bioGenous™ T Cell Expansion Medium



Once thawed, use immediately. Do not refreeze.



B: bioGenous™ T cell Activator B (200x)



Once thawed, use immediately or aliquot and store at **-20°C** for no more than 10 months. After thawing the aliquots, use them immediately. Do not refreeze.

bioGenous™ T Cell Medium:

1. Thaw T-cell Activator B (SFM-T001-B) (200x) on ice. Mix thoroughly.
2. Add 50μL of T cell Activator B (SFM-T001-B) (200x) to 9.85ml of T-cell basal medium B (SFM-T001-A). For robust T-cell expansion, we recommend adding 100μL FBS to the reconstituted T-cell expansion medium. Mix thoroughly.



If not used immediately, store the complete T-cell expansion medium at **2-8°C** for no more than 2 weeks.

Set up for T cell expansion cultures using PBMCs

1. Isolate PBMCs from fresh blood or thaw previously frozen peripheral blood mononuclear cells.
 2. Resuspended T cells of PBMCs in PBS and perform viable cell counts.
 3. Centrifuged cells at 800g for 3 min and discard the supernatant.
 4. Resuspended in viable cells in complete T-Cell Expansion Medium and adjust the cell concentration to 1×10^6 cells/mL or as required by the experimental objective and inoculated into appropriate culture plates or petri dishes.
 5. Incubate plates at 37°C in a 5% CO₂ incubator.
 6. After every 2-3 days, discard half of the supernatant and supplement with a fresh T-cell expansion medium.
- NOTE:** Do not maintain the same culture medium for longer than 3 days without supplementing with fresh medium.
7. T cells are generally harvested after 10 to 14 days of culture.
 8. For long-term (>15 days) expansion of T cells, T cells can be collected, resuspended in a fresh T-cell expansion

Safety information

Read the Safety Data Sheets (SDSs) on line and follow the handling instructions.

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Contact and Support

To ask questions, solve problems, suggest enhancements or report new applications, please visit our Online Technical Support Site. Tel: +86 400-600-8315; email: info@biogenous.cn.

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