

# ImmunoCult™ Human Th1 Differentiation Supplement

Serum-free culture supplement for the differentiation of human naïve CD4+ T cells into Th1 cells

Catalog # 10973 1 mL



Scientists Helping Scientists™ | WWW.STEMCELL.COM

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

## Product Description

ImmunoCult™ Human Th1 Differentiation Supplement contains a combination of human cytokines and a blocking antibody formulated to promote the robust activation, expansion, and differentiation of peripheral blood-derived, naïve, CD4+ human T cells into Th1 cells.

ImmunoCult™ Human Th1 Differentiation Supplement is intended for use with ImmunoCult™-XF T Cell Expansion Medium (Catalog #10981) and ImmunoCult™ Human CD3/CD28 T Cell Activator (Catalog #10971).

- Formulated for the induction of human Th1 differentiation
- Optimized for use with ImmunoCult™-XF T Cell Expansion Medium
- Supports significantly higher levels of memory T cells in comparison to competitor Th1 differentiation kit
- Supports up to 1.6X higher expansion of IFN- $\gamma$ -producing CD4+ T cells in comparison to competitor Th1 differentiation kit
- Supplied as a 50X concentrate; after thawing and mixing, the tube contents can be added directly to medium

## Properties

- Storage:** Store at -20°C.
- Shelf Life:** Stable for 12 months from date of manufacture (MFG) on label.
- Contains:**
- Recombinant human interleukin 12 (IL-12)
  - Recombinant human interleukin 18 (IL-18)
  - Mouse anti-human interleukin 4 (anti-IL-4)

## Handling / Directions For Use

### PREPARATION OF COMPLETE Th1 DIFFERENTIATION MEDIUM

Use sterile techniques to prepare complete Th1 Differentiation Medium (ImmunoCult™ Human Th1 Differentiation Supplement + ImmunoCult™-XF T Cell Expansion Medium). The following example is for preparing 50 mL of complete medium. If preparing other volumes, adjust accordingly.

1. Thaw ImmunoCult™ Human Th1 Differentiation Supplement at room temperature (15 - 25°C) until just thawed. Mix thoroughly.  
NOTE: If necessary, centrifuge for 30 seconds to recover liquid from cap.  
NOTE: If not used immediately, store supplement at 2 - 8°C for up to 1 month. Do not re-freeze.
2. Add 1 mL of ImmunoCult™ Human Th1 Differentiation Supplement to 49 mL of ImmunoCult™-XF T Cell Expansion Medium (Catalog #10981). Mix thoroughly.

### DIFFERENTIATION TO Th1 CELLS

1. Start with purified human naïve CD4+ T cells at  $1 \times 10^6$  cells/mL in complete Th1 Differentiation Medium.
2. Activate human naïve CD4+ T cells using ImmunoCult™ Human CD3/CD28 T Cell Activator (Catalog #10971) or other desired reagents to activate T cells. Incubate cells at 37°C and 5% CO<sub>2</sub>.
3. Adjust the cell density to  $1 \times 10^6$  cells/mL every 3 - 4 days as needed with the addition of fresh complete Th1 Differentiation Medium for 7 days.
4. On Day 7, differentiated Th1 cells are ready to be used in the desired application.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2017 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, Scientists Helping Scientists, and ImmunoCult are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.