

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



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

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

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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- γ -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 9 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 1×10^6 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% CO₂.
3. Adjust the cell density to 1×10^6 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.

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