

ImmunoCult™ Human Treg Differentiation Supplement

Serum-free culture supplement for the differentiation of human naïve CD4+ T cells into regulatory T cells (Tregs)

Catalog # 10977

1 mL



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

[INFO@STEMCELL.COM](mailto:info@stemcell.com) • [TECHSUPPORT@STEMCELL.COM](mailto:techsupport@stemcell.com)

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Product Description

ImmunoCult™ Human Treg Differentiation Supplement contains a human cytokine and small molecule formulated to promote the robust activation, expansion, and differentiation of peripheral blood-derived, naïve, CD4+ human T cells into regulatory T cells (Tregs).

ImmunoCult™ Human Treg 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 Treg differentiation
- Optimized for use with ImmunoCult™-XF T Cell Expansion Medium
- Supports higher levels of memory T cells in comparison to competitor Treg differentiation kit
- Supports up to 20% higher proportions of CD4+CD25+FOXP3+T cells in comparison to competitor Treg 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 TGF-β1
- All-trans retinoic acid

Handling / Directions For Use

PREPARATION OF COMPLETE Treg DIFFERENTIATION MEDIUM

Use sterile techniques to prepare complete Treg Differentiation Medium (ImmunoCult™ Human Treg 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 Treg 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 Treg Differentiation Supplement to 49 mL of ImmunoCult™-XF T Cell Expansion Medium (Catalog #10981). Mix thoroughly.

DIFFERENTIATION TO Tregs

1. Start with purified human naïve CD4+ T cells at 1×10^6 cells/mL in complete Treg 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 Treg Differentiation Medium for 7 days.
4. On Day 7, differentiated Tregs are ready to be used in the desired application.

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