STREAMLINE YOUR T CELL THERAPY DEVELOPMENT

Combine High-Performance ImmunoCult™-XF with ImmunoCult™ Human T Cell Activators

Activate and Expand Human T Cells for Use in T Cell Therapy Manufacturing

Streamline your cell therapy development and manufacturing by combining high-performance GMP ImmunoCult™-XF medium with GMP ImmunoCult™ Human CD3/CD28/CD2 T Cell Activator or ImmunoCult™ Human CD3/CD28 T Cell Activator. Designed for robust and consistent T cell activation and expansion, the ImmunoCult™-XF medium is serum- and xeno-free and has no added cytokines, while the ImmunoCult™ activators are highly stable and soluble—providing complete flexibility and choice of cytokine during your workflows.

The GMP ImmunoCult™ reagents together provide optimal T cell expansion and viability without the use of magnetic beads, feeder cells, or antigens. T cells can be harvested after just 10 - 12 days of culture and produce cytokines, including IFN-γ and TNF-α, upon restimulation. The ImmunoCult™ T cell workflow streamlines T cell therapy development by enabling process standardization and scale-up capability from discovery through to clinical and commercial manufacturing.

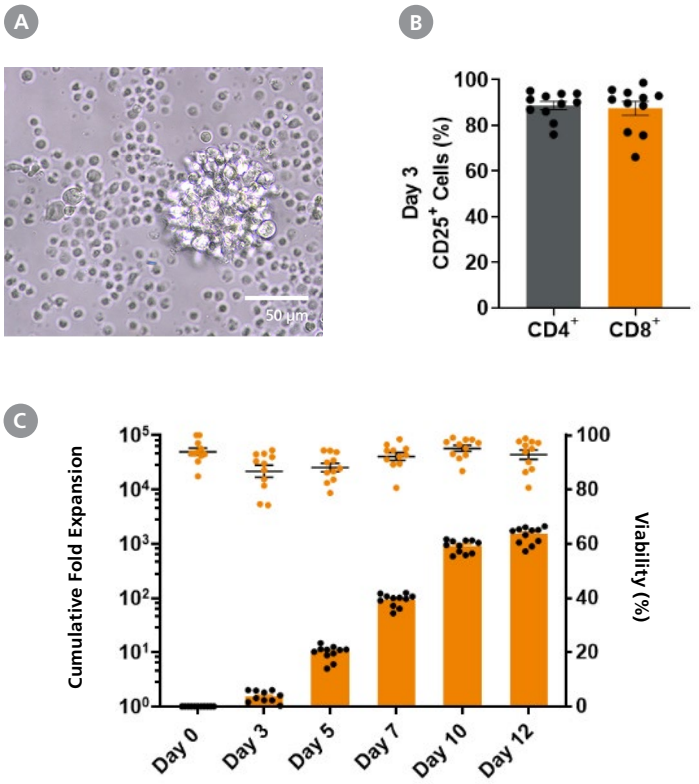

Figure 1. GMP ImmunoCult™-XF and GMP ImmunoCult™ Human CD3/CD28/CD2 T Cell Activator Generate High Yields of Viable and Functional T Cells

Negatively selected pan T cells were isolated using EasySep™ Human T Cell Isolation Kit (Catalog #17951), activated with ImmunoCult™ Human CD3/CD28/CD2 T Cell Activator (Catalog #100-0785), and maintained with ImmunoCult™-XF (Catalog #100-0956) supplemented with recombinant human interleukin-2 (rhIL-2) at 180 IU/mL and subcultured under low cell culture densities. (A) A clustered morphology is seen in activated human T cells after 3 days of culture. (B) Average proportion of $CD25^+$ T cells within $CD4^+$ or $CD8^+$ subsets after 3 days of culture. (C) Composite bar and point graph represents the average cumulative fold expansion and T cell viabilities, respectively for each assessed culture time point. Data represented as the mean ± SEM with 11 donors.

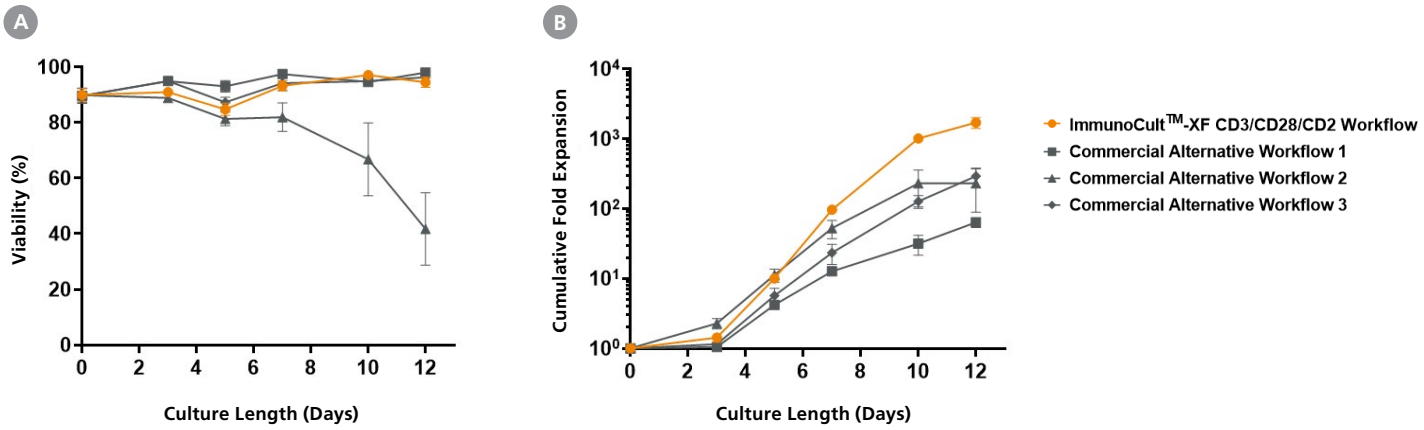

Figure 2. GMP ImmunoCult™ Medium and Activators Perform Equal to or Better than Commercial Alternatives

T cells were isolated from peripheral blood using EasySep™ Human T Cell Isolation Kit (Catalog #17951), activated with ImmunoCult™ Human CD3/CD28/CD2 T Cell Activator (Catalog #100-0785), and maintained in ImmunoCult™-XF (Catalog #100-0956) using the protocol recommended in the Product Information Sheet, or activated using a commercial alternative GMP T cell activator with their corresponding GMP medium and recommended expansion protocol. All cultures were expanded for 12 days and supplemented with rhIL-2. (A) T cell viability was compared to commercial alternatives over a period of 12 days in culture. ImmunoCult™-XF medium and activators showed similar or higher T cell viability compared to commercial alternatives. (B) Cumulative fold expansion of cells over a culture period of 12 days. Compared to all commercial alternatives tested, ImmunoCult™-XF medium and activators showed similar or higher fold expansion of total T cells. Data represented as the mean ± SEM (n = 4).

Why Use ImmunoCult™ for T Cell Therapy Manufacturing?

ROBUST. Expand T cells for use in cell therapy development with a medium produced under relevant GMPs

REPRODUCIBLE. Reduce variability by expanding T cells in serum- and xeno-free culture conditions

EFFICIENT. Achieve robust T cell expansion with high viability

FUNCTIONAL. Obtain T cells able to produce cytokines upon restimulation

STREAMLINED. Activate T cells bead-free by combining ImmunoCult™-XF with ImmunoCult™ Human T Cell Activators from preclinical development through to commercial manufacturing

Taking Your Research to the Clinic?

STEMCELL's Services for Cell Therapy program has a team of experts who can help support your regulatory filing by providing custom solutions such as quality documentation, additional product testing, and customized product manufacturing. To learn more about how we can support your preclinical and clinical research needs, visit us at **www.stemcell.com/cell-therapy-services**

Learn More

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