

Product Information

Human Peripheral Blood CD4+ Helper T Cells (Positive Selection)

Catalog Number	10HU-023	Cell Number	10 million cells/vial
Species	<i>Homo sapiens</i>	Storage Temperature	Liquid Nitrogen

Description

The CD4+ T cells, also known as T helper cells (T_h cells), are a type of T cells that play an important role in the immune system, particularly in the adaptive immune system [1]. CD4+ T cells can regulate immune response through different cytokines secreted [2]. They are essential in B cell antibody class switching, in the activation and growth of cytotoxic T cells, and in maximizing bactericidal activity of phagocytes such as macrophages.

Considering the diverse and important role CD4+ T cells play in the immune system, it is not surprising that these cells often influence the immune response against disease. CD4+ T cells have been involved in hypersensitivity and as the main target cells of HIV pathogenesis.

iXCells Biotechnologies offers CD4+ T Cells isolated from normal human peripheral blood mononuclear cells (PBMCs) using positive immunomagnetic selection. > 90% of the cells are CD4+ as showed by flow cytometric analysis (Figure 1).

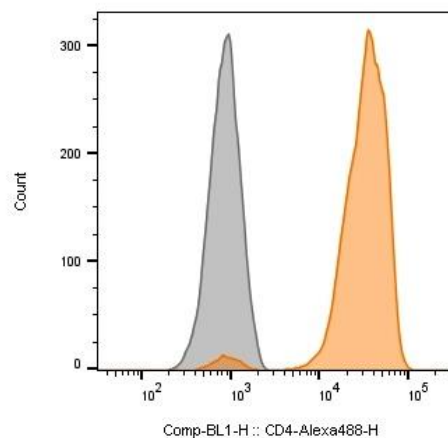


Figure 1. The purity of CD4+ T cells are >90%.

Product Details

Tissue	Normal human peripheral blood
Package Size	10 million cells/vial
Passage Number	P0
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Suspension
Media	Blood Cell Culture Medium (Cat# MD-0007)

Protocols

Thawing of Frozen Cells

1. Upon receipt of the frozen Human Peripheral Blood CD4+ Helper T Cells, it is recommended to thaw the cells and initiate the culture immediately in order to retain the highest cell viability.
2. To thaw the cells, put the vial in 37°C water bath with gentle agitation for 1-2 minutes. Keep the cap out of water to minimize the risk of contamination.
3. Pipette the cells into a 15 mL conical tube with 5 mL fresh **Blood Cell Culture Medium** (Cat# MD-0007).
4. Centrifuge at 400-450 g for 5 minutes under room temperature.
5. Remove the supernatant and cell is ready for downstream applications.

Safety Precaution: *it is highly recommended that protective gloves and clothing should be used when handling frozen vials.*

References

[1] Hu, J.; Paul, W. E. (2008). "CD4 T cells: Fates, functions, and faults". *Blood* **112** (5): 1557.

[2] Toscano MA, Bianco GA, Ilarregui JM, Croci DO, Correale J, Hernandez JD, Zwirner NW, Poirier F, Riley EM, Baum LG, Rabinovich GA. (2007). "Differential glycosylation of TH1, TH2 and TH-17 effector cells selectively regulates susceptibility to cell death". *Nat Immunol* (8): 825–34.

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