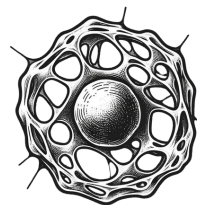


Whitepaper

PRESERVATION OF PBMCs AT HYPOTHERMIC TEMPERATURES IN CYTOSTOR™



CYTOSTOR™



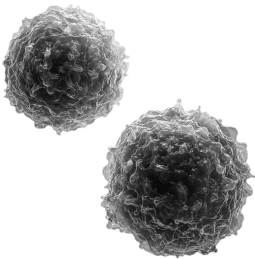
ATELERIX
SAVE YOUR CELLS

Preservation of PBMCs at hypothermic temperatures in CytoStor

Overview

Atelerix's products extend the shelf life of fresh biological products during hypothermic (room temperature or refrigerated) storage through preventing lipid membrane deterioration. Cryopreservation of PBMCs is a common tool for the storage and transport of PBMCs, however the freezing process is known to induce mechanical and biochemical cellular stress, leading to impaired viability and function. This whitepaper demonstrates the preservation of PBMC viability and cell composition after hypothermic storage in Atelerix's product, CytoStor.

Human PBMC samples are used as source material to isolate lymphocytes (T cells, B cells, and NK cells) and monocytes for basic research or cell therapy applications. Mononuclear cells are widely used in research and clinical applications, such as immunotherapies, microbiology, virology, oncology, vaccine development, toxicology, as well as transplant and regenerative biology.



PBMCs

Preservation of primary PBMC viability and cell subset composition

CytoStor allows storage of high quality primary PBMCs for 3 days at either 2-8°C or 25°C (a), yielding a recovery comparable to that of cryopreservation. PBMCs remain stable up to 5 days at 2-8°C. Isolation of T cells from CytoStor-stored PBMCs showed >80% viability after 5 days storage (b), indicating excellent stability of T cells by Atelerix's hydrogel technology.

Assessment of cellular composition of CytoStor-stored PBMCs showed stabilisation of T cell, B cell, NK cell, NKT cell, and monocyte proportions after 3 days at 2-8°C (c). T cells and NK cells favoured storage at 25°C, while B cells and monocytes were stable at refrigerated or room temperature.

