

# **CAPTURE TIME**

## NutriFreez® D10

**Cryopreservation Medium** 



### Powerful cryopreservation media optimized for enhanced performance across a broad range of cells

NutriFreez® D10 Cryopreservation Medium is a chemically defined, animal component-free, serum-free, and protein-free cryopreservation agent composed of Methylcellulose and 10% Dimethyl Sulfoxide (DMSO) manufactured under cGMP conditions.

NutriFreez® D10's formulation is optimized to protect a wide range of human and animal-derived cells, including highly sensitive cell types such as primary cells, lymphocytes, and stem cells, in ultra-low temperatures of -196°C while assuring enhanced viability and recovery rates over conventional methods and other serum-free products.

NutriFreez® D10's unique composition is designed to maximize cell recovery, while maintaining stem cell pluripotency.

Due to NutriFreez® D10's excellent performance and ease of use, it has become the cryopreservation media of choice in the top cell banking facilities worldwide.

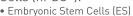
#### **Cell Types and Applications**



Sensitive Cells (ex.T cells, beta cells)



Human Pluripotent Stem Cells (hPSC\*):







Mesenchymal Stem Cells (MSCs) from various sources:

- Bone Marrow (BM-MSC)
- Adipose Tissue (AT-MSC)
- Umbilical Cord Tissue (UC-MSC)
- Dental Pulp Tissue (DP-hMSC)



Neurons, Astrocytes



Cord Blood Cells



Multiple mammalian cell lines, adherent and in suspension, >90% recovery:

MRC-5, HEK-293, HepG2, HeLa, BSC-1, BGM, 3T3, MA-10, BHK-21, B16-F10, MA-10



Peripheral Blood Mononuclear Cells (PBMCs)



Human Endothelial Cells (EC)



Hybridomas



CHO Cells

<sup>\*</sup> Clumps or single cells in both feederdependent and feeder-free culture

#### **Features**

- Ready-to-use, simple protocol
- Fully defined medium
- Ideal for serum-free applications
- Animal component-free
- Serum-free and protein-free
- cGMP manufactured
- Sterility, endotoxin, and cell-based quality control testing
- Lot-to-lot consistency

- Applied for DMF
- Improves post-thaw cell yield, viability and recovery
- Available in several sizing options in addition to customizable packaging



Over > 300 articles, abstracts, and posters citing CryoStem™ now Nutrifreez® D10 Cryopreservation Medium for over 10 years.



Nutrifreez® D10 Cryopreservation Medium has been applied in Clinical trials worldwide.



Nutrifreez® D10 Cryopreservation Medium has been approved in cell banking facilities worldwide.

#### The Ultimate Cryopreservation Medium for Stem Cells

Ideal for cryopreservation of valuable human induced pluripotent stem cells (hiPSC) and human embryonic stem cells (hESC), showing increased cell viability while maintaining cell pluripotency, normal karyotype, and proliferation ability after freeze-thaw procedure.

Results of a cryopreservation comparison performed at the Research and Development Center for Cell Therapy (Japan) on human pluripotent stem cells (hPSCs), show that NutriFreez®D10 Cryopreservation Medium\*\* presents the best recovery rate for hPSCs after thawing

Nishishita et al. Am J Stem Cells. 2015

Using NutriFreez® D10 Cryopreservation Medium for the cryopreservation of human Mesenchymal Stem Cells (hMSCs) showed superior post-thaw viability and recovery rates in addition to increased cell re-attachment and growth performance when compared to other commercially available serum-free cryopreservation products.

Ottawa Hospital Research Institute (Canada) shows that hMSCs cryopreserved in NutriFreez® D10 Cryopreservation Medium\*\* exhibit the best post-thaw viability

Salkhordeh et. al. Cytotherapy, May 2018

#### **Ordering Information**

Cat. No.	Qty
05-713-1A	500ml
05-713-1B	100 mL
05-713-1C	20 mL
05-713-1E	50 mL
05-713-1D	10 mL
	05-713-1A 05-713-1B 05-713-1C 05-713-1E



How to Order

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<sup>\*\*</sup>NutriFreez® brand replaces the brand CryoStem™