

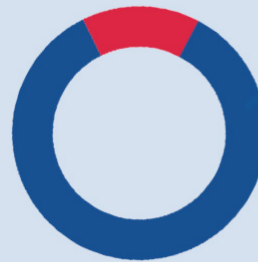


CELLBANKER[®]

CRYOPRESERVATION

INTRODUCTION

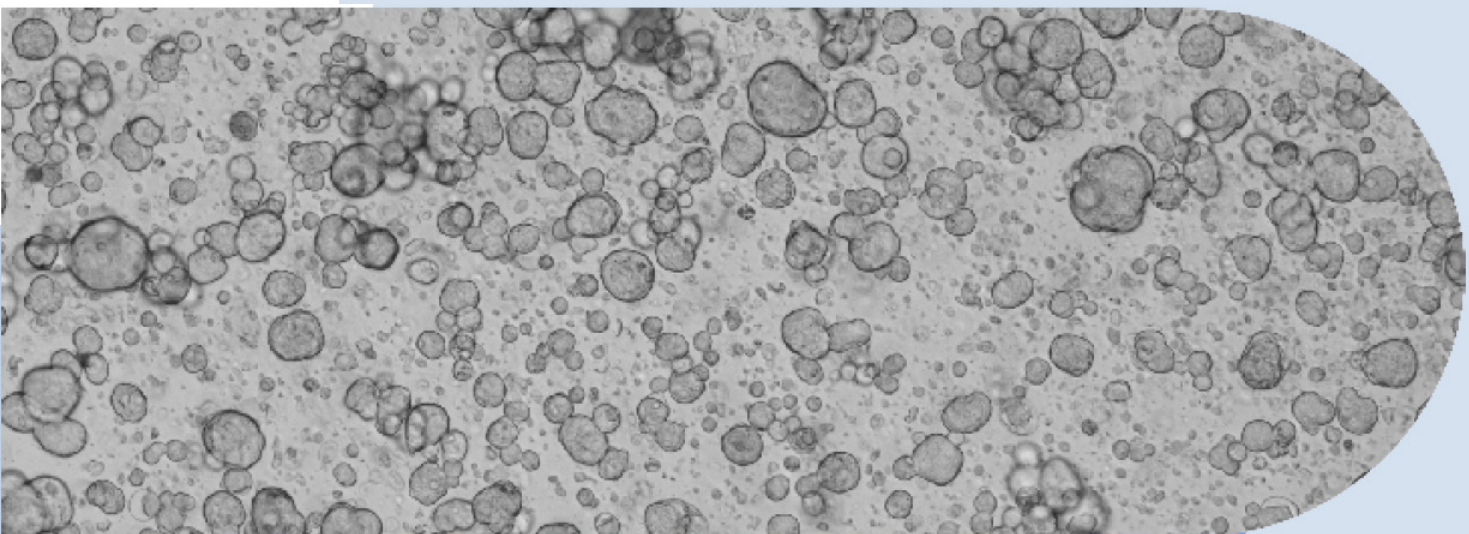
CELLBANKER® CRYOPRESERVATION



Survival rate of
all cell types*

The CELLBANKER® series offers a comprehensive range of cryopreservation solutions designed for high cell viability, recovery, and ease of use. With ready-to-use formulations that eliminate the need for complex preparation, CELLBANKER® ensures reproducibility and long-term stability across diverse applications, including stem cell and organoid storage, as well as GMP-compliant bioprocessing.

Options include serum-free, animal-free, and customized formats, making it the ideal choice for both research and clinical applications.



Human Prostate Organoids, grown from single cells/ cell clumps that had been frozen with STEM-CELLBANKER (recovery rate was over 90%). Image courtesy of Supreet Agarwal, NIH, Bethesda, USA)

CELLBANKER® SERIES

Discover the advantages of CELLBANKER®:

- Consistently high cell viability post thaw (>90%)
- No programmed freezer or liquid nitrogen required
- Long shelf life
- Tested on many cell types
- Freeze directly in -80°C freezer
- Allows viable long term cell storage > 10 years at -80°C or -196°C
- Ready-to-use formulas avoid mixing of DMSO and filtration



CELLBANKER® 1:

CELLBANKER® 1 is a ready-to-use serum containing cell cryopreservation medium designed for a broad spectrum of mammalian cells. This unique formulation allows for stable cryopreservation and high viability after freeze-thaw cycles, even for sensitive cells.

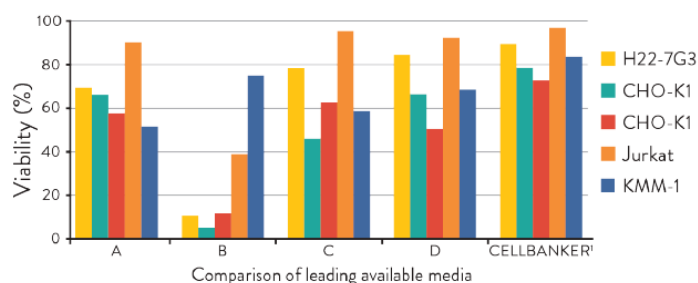


CELLBANKER® 2:

CELLBANKER® 2 is a serum-free cell cryopreservation medium optimized for serum-free cultured cells and peptide/protein expressing cells. CELLBANKER® 2 offers a low cost-animal free cryopreservation media for all applications where risks of contamination must be avoided.

Typical cell recovery rates for CELLBANKER® 1 and 2

Cell type	Preservation period (Year)	Viability of cells (%) at -80°C
Fibroblasts	5	90
Caco-2	5	90
K562	5	90
Jurkat	10	90



Viability Comparative Trial (-80 °C, 1 Year Storage)

Comparative Analysis of CELLBANKER® 1 vs. conventional cell cryopreservation method.

The unique formulation allows for stable cryopreservation and high viability after freeze-thaw procedure, even for sensitive cell lines.



STEM- CELLBANKER® GMP grade (Available DMSO Free)

STEM-CELLBANKER® is a chemically defined freezing media optimized for stem cells and iPS cells storage, as well as fragile primary cells. Furthermore, recent data supports its ability to cryopreserve organoids and tissues to allow the recovery of viable cells.



Free from animal-derived components and chemically defined. All formulations of STEM-CELLBANKER are manufactured with USP, EP and JP pharmacopoeia grade ingredients and have Biologics Master Files (BB-MF) registered with the FDA (Food and Drug Administration).

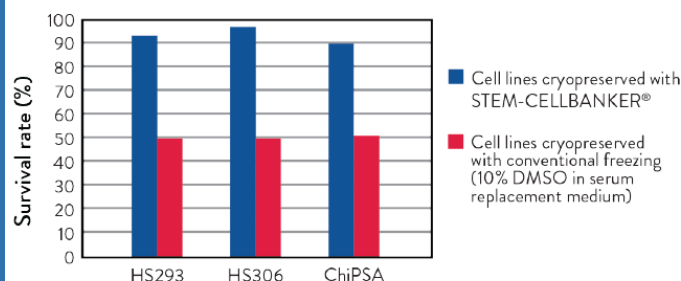
Available in both DMSO containing and DMSO-Free formulations, STEM-CELLBANKER® is an optimal freezing solution for basic research and clinical application of cell therapy products.

A Biologics Master File for STEM-CELLBANKER® has been registered with the Food and Drug Administration (FDA)

STEM-CELLBANKER® vs Conventional freezing

Cell viability assessment: trypan Blue & calcein-esterase based live-dead assay. Result: Significantly higher cell viability was observed while cell pluripotency, normal karyotype and proliferation ability were maintained in HS293, HS306 and ChiPSA cell lines.

Study by Department of Clinical Science, Intervention and Technology, Karolinska Institute.



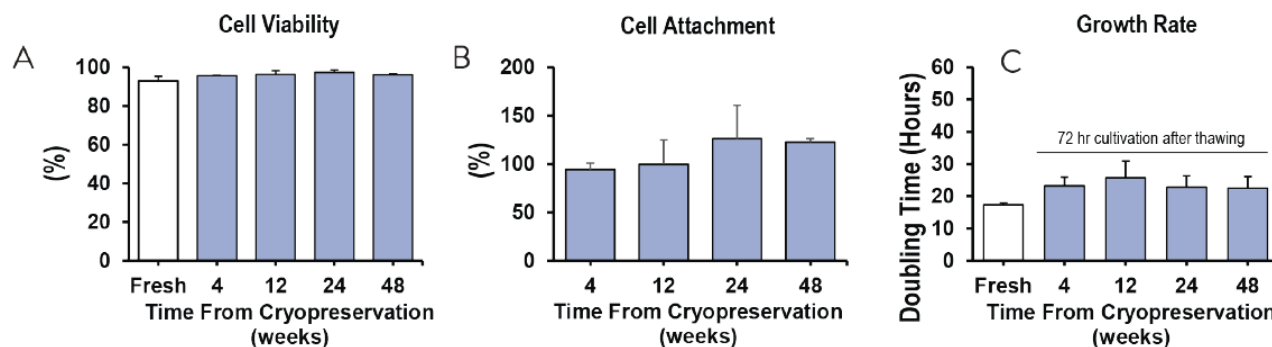
STEM-CELLBANKER® EX GMP grade

STEM-CELLBANKER® EX GMP grade is a human and animal component-free cell cryopreservation solution that expands the possibilities of cell therapy.

SCB EX is manufactured to JP, EU, US and PIC/S GMP guidelines, containing only USP, EP, JP pharmacopoeia grade chemically defined components. Formulated from FDA-registered “Inactive Ingredients” SCB EX is suitable for the direct administration of cell therapy products to human subjects.

Optimized for cryopreserving stem cell-derived products, mesenchymal and human hematopoietic stem cells. SCB EX supports the advancement of innovative therapies and the potential of cell-based treatments.

Cryopreservation performance test using Adipose-Derived Stromal/Stem Cells (ADSC) in STEM-CELLBANKER® EX



(A) Cell Viability immediately after thawing cryopreserved cells.

(B) Cell numbers were analyzed after thawing and overnight incubation.

(C) Cell proliferation was evaluated after thawing and culturing for 72 hours.

In summary:

High cell viability and maintenance of cell function of STEM-CELLBANKER® EX cryopreserved cells after thawing.



CUSTOM CELLBANKER®

Custom CELLBANKER® provides tailored cryopreservation solutions designed to integrate seamlessly into specific GMP workflows.

With options for custom packaging, format configurations and formulation, it ensures flexibility for automated and large-scale bioprocessing while maintaining high cell viability and consistency.

Featured references

- Clevers et al. Med. Volume 4, Issue 5p290-310.e12May 12, 2023
Patient-derived head and neck cancer organoids allow treatment stratification and serve as a tool for biomarker validation and identification.
- Viviane T et al. Cell Stem Cell. 2021 Feb 4;28(2):217-229
Pre-clinical trial Preclinical Efficacy and Safety of a Human Embryonic Stem Cell-Derived Midbrain Dopamine Progenitor Product, MSK-DA01
- Yamanaka et al. Med. Volume 4, Issue 1, 13 January 2023, Pages 51-66.e10
A clinical-grade HLA haplobank of human induced pluripotent stem cells matching approximately 40% of the Japanese population
- Knoblich et al. Nature Methods. 2017 May 14;743-751
Fused cerebral organoids model interactions between brain regions.
- Yamanaka et al. Sci Rep 2014 Jan 8;4:3594
A novel efficient feeder-free culture system for the derivation of human induced pluripotent stem cells.



Description	Pack Size	Catalog No.
CELLBANKER® 1 - Serum containing	20ml	11911
CELLBANKER® 1 - Serum containing	100ml	11910
CELLBANKER® 2 - Serum free	100ml	11914
STEM-CELLBANKER® - GMP	20ml	11922
STEM-CELLBANKER® - GMP	100ml	11924
STEM-CELLBANKER® - GMP - DMSO - Free	20ml	13925
STEM-CELLBANKER® - GMP - DMSO - Free	100ml	13926
STEM-CELLBANKER® EX - GMP	100ml	11936
CELLOTION® Cell Wash Solution	100ml	11898

*For full list of cell types tested please contact **amsbio**.

amsbio is the global source for CELLBANKER® reagents. CELLBANKER® is a registered trade mark of and manufactured by NIPPON ZENYAKU KOGYO.

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