FUJIFILM
Value from Innovation

Wako

Room-Temperature Storage | Refrigerated Storage

For short storage such as cell transportation!

Cellstor-S, Cellstor-W

Cellstor-S is a cell suspension and preservation solution, and Cellstor-W is a cell wash and preservation solution manufactured by Otsuka Pharmaceutical Factory, Inc.
They are used for refrigerated and room-temperature storage.
They do not contain any components of human or animal origin.
They are reagents for research use and are not intended for medical use in humans or animals.

Otsuka
Otsuka Pharmaceutical Factory, Inc.

Features

- Store cells at room or refrigerated temperature
- Human and animal origin-free

Usage

Extract the solution with a needle and a syringe.
The product bags are not designed for cell storage. When storing cells, use a container suitable for cell storage.

Differences in Usage of Cellstor-S and Cellstor-W

Since Cellstor-S is formulated with dextran 40, it is not suitable for washing cells when performing centrifugation. In such cases, using “Cellstor-W” solution, which does not contain dextran 40, is recommended.

Cellstor-S	Cellstor-W
Contains 5% dextran 40 (To suppress cell sedimentation)	Dextran 40 free
Unsuitable for centrifugation	Suitable for centrifugation

Composition

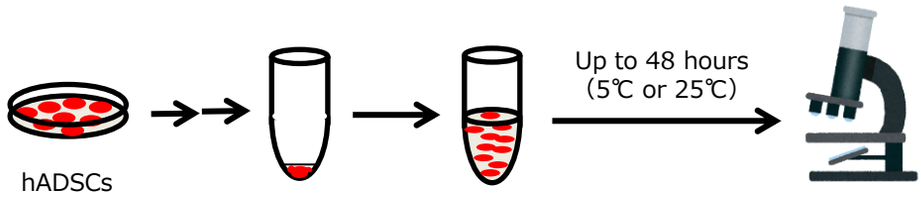
Ingredients and their quantities in a bag (250 mL)

Ingredients	Cellstor-S	Cellstor-W
Dextran 40	12.5 g (5%)	-
Trehalose Hydrate	8.29 g (3%)	
Calcium Chloride Hydrate	0.05 g (0.02%)	
Potassium Chloride	0.075 g (0.03%)	
Sodium Chloride	1.5 g (0.6%)	
Sodium L-Lactate	0.775 g (0.3%)	
pH Adjuster	Appropriate Amount	
Water for Injection	Appropriate Amount	

Product Number	Product Name	Package Size	Storage Condition
637-46391	Cellstor-S	250 mL	R.T.
630-46401	Cellstor-W	250 mL	R.T.

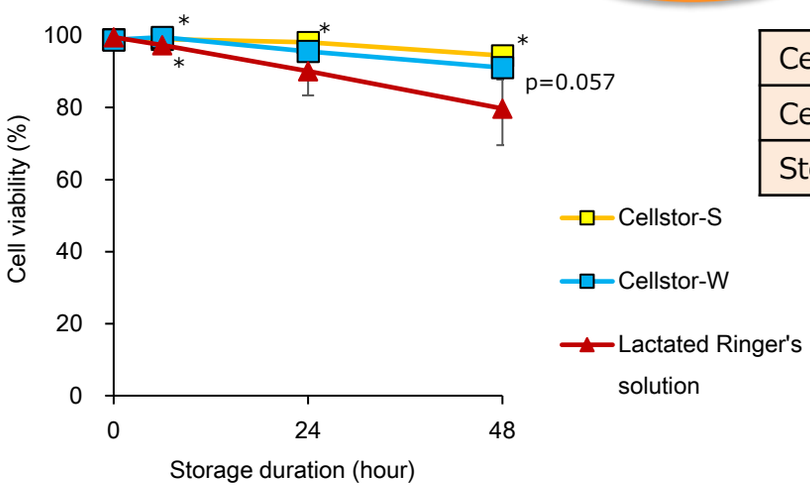
Example of Use 1 ~Temporal Changes in Cell Viability~

Changes in the cell viability of human adipose-derived mesenchymal stromal cells (hADSCs) in Cellstor-S, Cellstor-W or various solutions after storage at 5℃ or 25℃



Temporal changes in cell viability (25℃)

Room-Temperature Storage



Cell species	hADSCs
Cell concentration	5×10^{5}cells/mL
Storage temperature	25℃

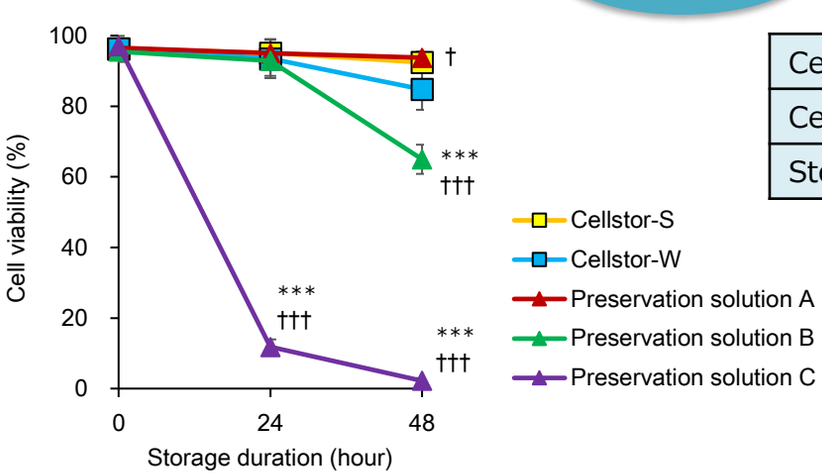
Cell viability after 24-hour storage

Cellstor-S	98.1%
Cellstor-W	95.6%

Mean±SD (n=4), *;p<0.05 Dunnett's test vs lactated Ringer's solution

Temporal changes in cell viability (5℃)

Refrigerated Storage



Cell species	hADSCs
Cell concentration	5×10^{5}cells/mL
Storage temperature	5℃

Cell viability after 24-hour storage

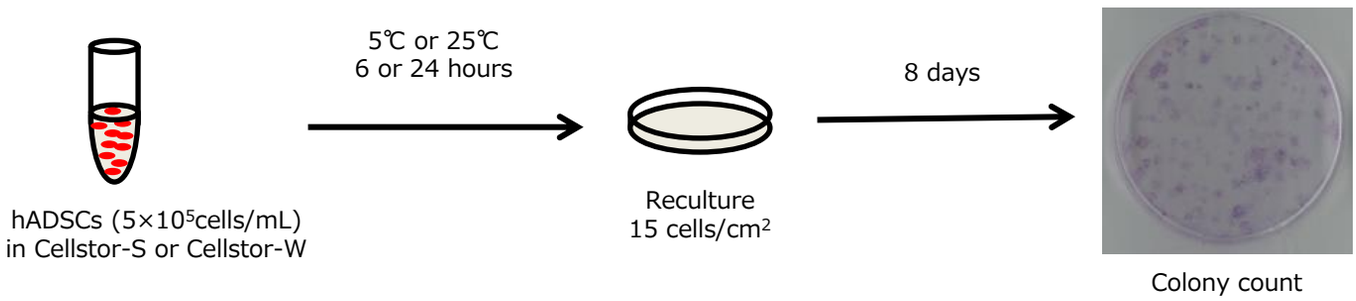
Cellstor-S	95.1%
Cellstor-W	93.5%

Mean±SD (n=4),
***;p<0.001 Dunnett's test, preservation solution A, B, C vs Cellstor-S
†;p<0.05, †††;p<0.001 Dunnett's test, preservation solution A, B, C vs Cellstor-W

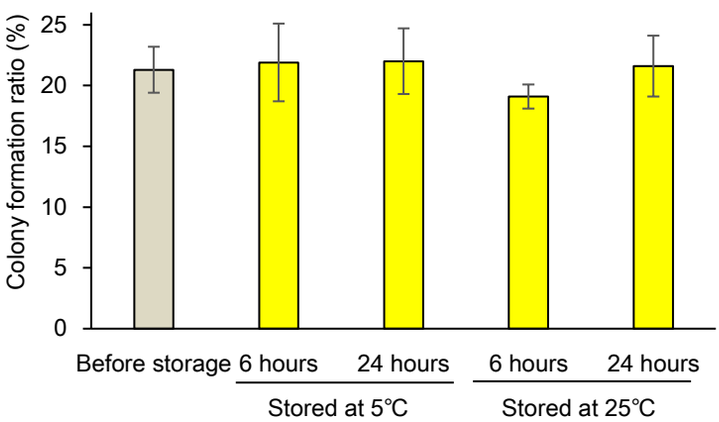
Maintained high viability up to at least 24 hours

Example of Use 2 ~Colony Formation Ratio~

Colony-forming capacity of human adipose tissue-derived mesenchymal stromal cells after 6-hour or 24-hour storage at 5℃ or 25℃ in Cellstor-S or Cellstor-W

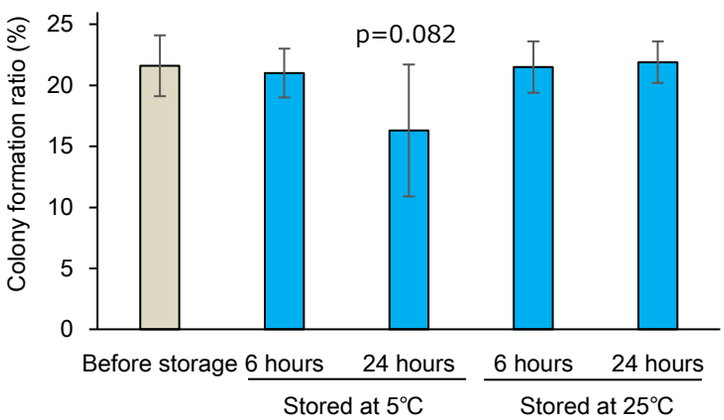


Colony formation ratio before and after storage in Cellstor-S



Mean±SD (n=4)
There was no statistical significance (α=0.05) Dunnett's test vs Before preservation

Colony formation ratio before and after storage in Cellstor-W



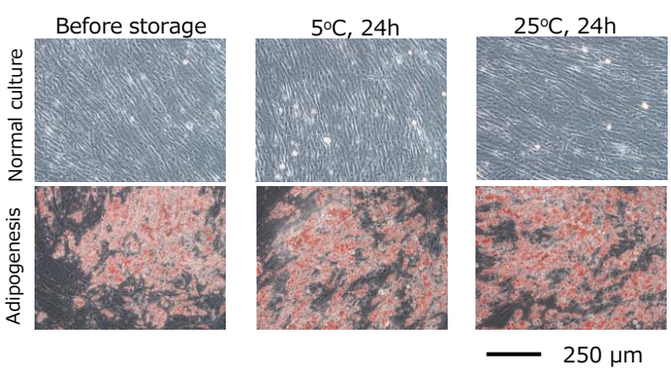
Mean±SD (n=4)
There was no statistical significance (α=0.05) Dunnett's test vs Before preservation

Maintained colony formation ratio up to at least 24 hours

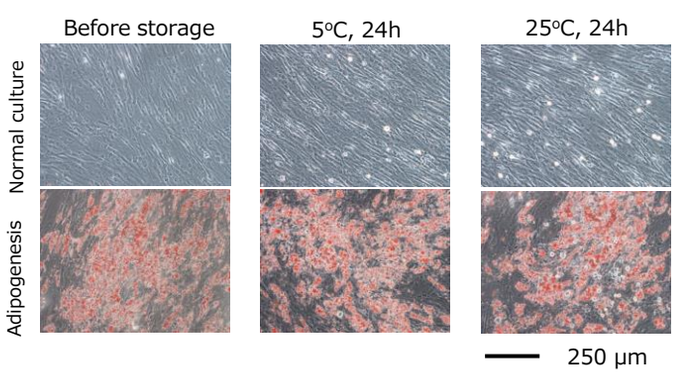
Example of Use 3 ~Confirmation of Adipogenic Differentiation

Representative images of the adipogenesis differentiation assay with hADSCs (5×10⁵ cells/mL) preserved in Cellstor-S and Cellstor-W after 24-hour storage at 5℃ or 25℃. Adipogenic differentiation was induced and evaluated by Oil Red O staining.

Adipogenic differentiation before and after storage in Cellstor-S



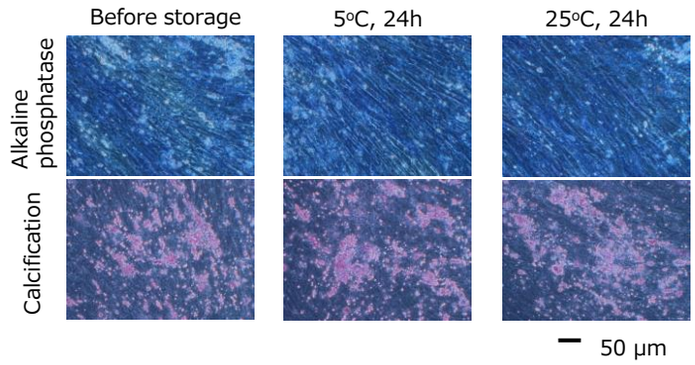
Adipogenic differentiation before and after storage in Cellstor-W



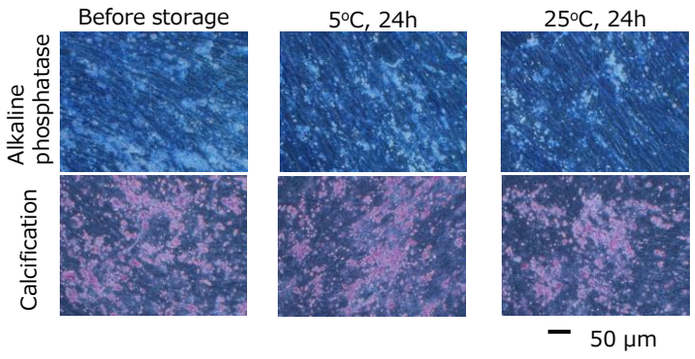
Example of Use 4 ~Confirmation of Osteogenesis Differentiation Ability~

Representative images of the osteogenesis differentiation assay with hADSCs (5×10^5cells/mL) preserved in Cellstor-S and Cellstor-W after 24-hour storage at 5℃ or 25℃. Osteogenic differentiation was induced and evaluated with an alkaline phosphatase staining kit and a calcified nodule staining kit.

Osteogenic differentiation before and after storage in Cellstor-S

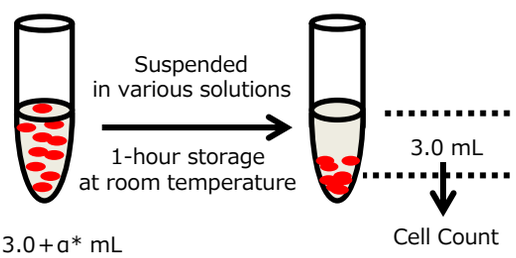


Osteogenic differentiation before and after storage in Cellstor-W

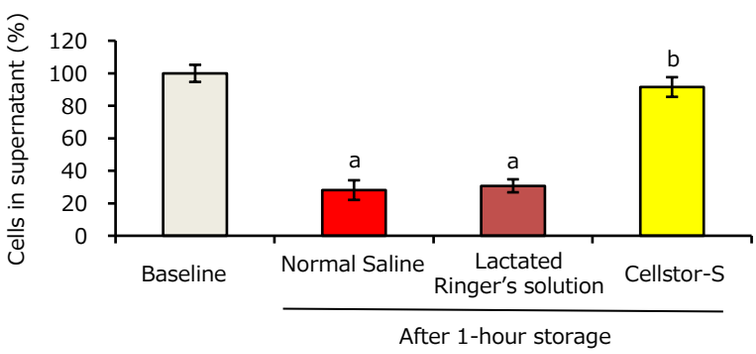


Example of Use 5 ~Confirmation of Cell Suspension Ability~

The percentage of cells in the supernatant after 1 hour of settling in normal saline, lactated Ringer's solution and Cellstor-S (The cells in the supernatant immediately after suspension were treated as 100%.)



3.0+α* mL
2.5×10^5 cells/mL
* Residual volume after removing almost all of the supernatant after centrifugation



Mean±SD (n=6)
a, b; Different characters show significant difference ($p<0.05$). Tukey's test

Cellstor-S prevents cell sedimentation for at least 1 hour

This leaflet is based on information as of March 2021.

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