

# STEM-CELLBANKER® DMSO Free GMP Grade (Chemically defined cryopreservation solution)

**\*\*For Research Use Only\*\***

Manufactured By

**ZENOGEN PHARMA CO., LTD.**

**\*\*FDA DMF Registered\*\***

Cat#: 13926 (100mL), 13925 (20mL)  
Storage Temperature: 2 to 8°C or below -20°C.  
Expiry Date: 3 years from manufacturing date (see label)  
Manufactured By: Zenogen Pharma Co., Ltd



## Protocol:

### Freezing

For optimum results, cells for cryopreservation should be in log phase of growth. Similar or other standard freezing protocols may be substituted.

1. Examine and make sure the cell culture is free of contamination, in healthy and at proper confluency.
2. Perform a cell count to determine the viability of cells.
3. Centrifuge at 1,000 - 2,000 rpm, 4°C for 3 to 5 minutes to gently pellet the cells. Remove the supernatant with an aspirator.
4. Gently suspend STEM-CELLBANKER® cryopreservation medium (1 mL for  $5 \times 10^5$  -  $5 \times 10^6$  cells).
5. Transfer 1 mL of the cell suspension to cryopreservation vial labeled with appropriate information (the cell line name, concentration, passage date etc.).
6. Place the vials directly in -80°C for storage.
7. **(OPTIONAL)** Transfer the frozen vials to a liquid nitrogen storage tank after the vials have been frozen for at least 24 hours.

**IMPORTANT: Optimum protocol may change with the cell types.**

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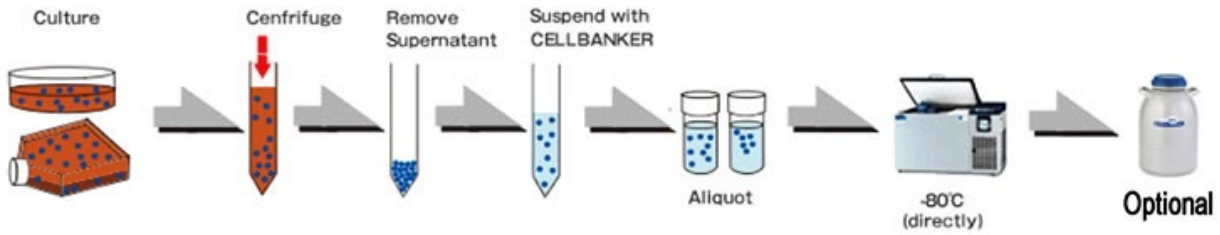
**Iwai North America Inc.**

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Email: [orders@iwai-chem.com](mailto:orders@iwai-chem.com)

Tel: 650-486-1541

## Procedure for Use:



## Thawing

1. Remove the cryopreservation vial from the freezer and quickly thaw cells in a 37°C shaking water bath or shake by hand.
2. Transfer the content to a centrifugation tube then immediately dilute and gently mix with 10mL of complete cell culture medium. **Using CELLOTION® instead of complete culture medium will prevent adhesion of cells to the wall of the tube, increasing the recovery rate.**
3. Centrifuge cells at 1,000 - 2,000 rpm, 4°C for 3 to 5 minutes. Remove the supernatant with an aspirator.
4. Gently resuspend the cells with appropriate volume of complete cell culture medium then plate in a culture flask or plate.
5. Continue the culture procedures according to standard protocols.

## Cells Tested (Check website for updated list)

## FDA Master File:

This product is registered with FDA Drug Master File. Please contact us at [orders@iwai-chem.com](mailto:orders@iwai-chem.com) or fill out the form online.

## References:

Mao, X. & Zhao, S. Neuronal Differentiation from Mouse Embryonic Stem Cells In vitro. JoVE e61190 (2020) doi: 10.3791/61190.

Ueda, H. et al. Establishment of in vitro 3D spheroid cell cultivation from human gynecologic cancer tissues. STAR Protocols 2, 100354 (2021) doi: 10.1016/j.xpro.2021.100354.

Sako, K. et al. Optimization of Spheroid Colony Culture and Cryopreservation of Nucleus Pulposus Cells for the Development of Intervertebral Disc Regenerative Therapeutics. Applied Sciences 11, (2021) doi: 10.3390/app11083309.

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Yagishita, S. et al. Characterization of the large-scale Japanese patient-derived xenograft (J-PDX) library. *Cancer Science* 112, 2454–2466 (2021) doi: 10.1111/cas.14899.

Miklosz, A. et al. Does TBC1D4 (AS160) or TBC1D1 Deficiency Affect the Expression of Fatty Acid Handling Proteins in the Adipocytes Differentiated from Human Adipose-Derived Mesenchymal Stem Cells (ADMSCs) Obtained from Subcutaneous and Visceral Fat Depots? *Cells* 10, (2021) doi: 10.3390/cells10061515.

Ueno, K. et al. Freezing of cell sheets using a 3D freezer produces high cell viability after thawing. *Biochemistry and Biophysics Reports* 28, 101169 (2021) doi: 10.1016/j.bbrep.2021.101169.

### **Disclaimer:**

STEM-CELLBANKER® DMSO Free GMP grade is not itself a pharmaceutical. Therefore, no warranty, express or implied, as to the fitness and suitability of this product for any particular purpose and/or merchantability unless the use is intended for research.

### **Ordering Details:**



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