

# STEM-CELLBANKER<sup>®</sup> series

## GMP-grade cryopreservation media for cells and tissues



- Ready-to-Use
- Serum-Free
- Protein-Free
- JP/USP Highest Quality Components
- GMP Manufactured
- FDA / PMDA Master File
- pH, Osmolarity, Sterility, Mycoplasma, Endotoxin and Cell-Based Release Testing

**STEM-CELLBANKER<sup>®</sup> GMP grade** is a chemically defined cryopreservation solution for cells and tissues that contains no serum or animal-derived ingredients and only pharmacopoeial grade chemical ingredients. It requires no adjustment and is useful for storing samples as is. The three types of GMP grade products can make a significant contribution to R&D and manufacturing processes in the fields of regenerative medicine and cell therapy.

### Product Information

Product Name	Code#	Size
STEM-CELLBANKER GMP grade	11924	100mL bottle
STEM-CELLBANKER GMP grade	11922	20mL bottle
STEM-CELLBANKER DMSO Free GMP grade	13926	100mL bottle
STEM-CELLBANKER DMSO Free GMP grade	13925	20mL bottle
STEM-CELLBANKER EX GMP grade	11936	100mL bottle

### ZENOGEN PHARMA CO., LTD.

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Contact



Distributor



Web



Technical support



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## Cryopreservation Protocol for dissociated cells

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

Examine and make sure the cell culture free of contamination, in healthy situation and proper confluence, etc.

### Freezing ;

1. Prepare cells to be cryopreserved into suspension.
2. Perform cell count to determine the viability of cells.
3. Centrifuge cells to obtain cell pellet.  
Centrifugation: 3 - 5 minutes at 800 ~ 2,000 rpm, 4°C
4. Remove supernatant using a aspirator - Note: Remove as much culture media as possible, to reduce dilution of STEM-CELLBANKER solution.
5. Add STEM-CELLBANKER solution.

※Cell concentrations:  $5 \times 10^5$  –  $5 \times 10^6$  cells/mL.

※DMSO is pre-mixed in STEM-CELLBANKER GMP grade and STEM-CELLBANKER EX GMP grade. Propylene Glycol is pre-mixed in STEM-CELLBANKER DMSO Free GMP grade.

6. Gently suspend the cells.
7. Dispense the cell suspension in 1ml aliquots to cryopreservation vials.
8. Place the vials directly in a -80°C for storage.

※If necessary, transfer the frozen vials to a liquid nitrogen storage tank after the vials have been frozen for at least 24 hours.

※Use a controlled rate freeze (-1°C/min) or similar slow freezing protocol for most mammalian cells.

※For more challenging samples, the combined use with the freezing device or container can be expected to produce good results.

### Storage ;

Place samples into storage.

- Store samples at -80°C.
- Store at liquid nitrogen temperature (-130°C or below) if necessary.

### Thawing ;

1. Remove the frozen cells from storage and quickly thaw in a 37°C water bath or dry bath.
2. The sample should be thawed by gently swirling the sample until all visible ice has melted.
3. Immediately dilute cells/CELLBANKER mixture with 10-fold the volume of complete cell culture media or any equivalent isotonic media and mix gently.
4. Gently pellet the cells centrifugation (3-5 minutes at 800 ~ 2,000 rpm, 4°C).
5. Remove the supernatant aspirator.
6. Gently suspend the cells with appropriate volume of complete cell culture medium.
7. Perform cell count to determine the viability of cells after thawing.
8. Place into the cultures conditions.
9. Viability assessment 24 hours after thawing

※Continue the further culture procedures according to standard protocols.

※It is possible to further understand the condition of the cells by confirming the functional properties of the cells (e.g. cell proliferation, cell adhesiveness, antigenicity of membrane surface molecules) after thawing.

CELLBANKER products ship at ambient temperature. Upon receipt, store at 2 - 8°C until ready to use.

Further protocol support is available at  
zenogen\_pharma-post@zenoqa.jp

STEM-CELLBANKER series are manufactured under GMP as GMP-grade materials.

Test items and the standards are provided on all lot specific Certificates of Analysis (CoA) .

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