CELLBANKER® series

Basic cryopreservation media for cells and tissues

- **Ready-to-Use**
- **High Cell Viability**
- **pH, Osmolarity, Sterility, Mycoplasma, Endotoxin and Cell-Based Release Testing**

CELLBANKER®1, pre-formulated with 10% DMSO, is a cryopreservation medium containing newborn calf serum for broad spectrum of mammalian cells.

CELLBANKER® 2, pre-formulated with 10% DMSO, is a serum-free cryopreservation medium for broad spectrum of mammalian cells. It is uniquely formulated to achieve stable freezing and high thaw survival without the use of serum, making it ideal for freezing and storing serum-free cultured cells and peptide/protein expression cells.

Product Information

Product Name	Code#	Size
CELLBANKER 1	11910	100mL bottle
CELLBANKER 1	11911	20mL bottle
CELLBANKER 2	11914	100mL bottle

ZENOGEN PHARMA CO., LTD.

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CELLBANKER® series

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 CELLBANKER solution.**
5. **Add CELLBANKER solution.**

※Cell concentrations: 5 x 10^5 – 5 x 10^6 cells/mL.

※DMSO is pre-mixed in CELLBANKER 1 and 2 .

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

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

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