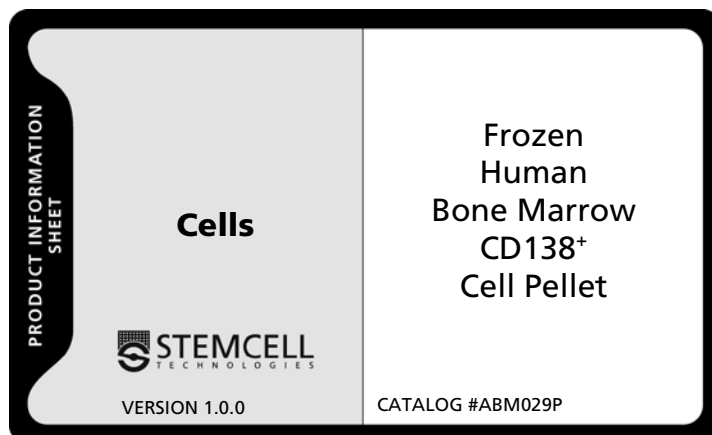


PRODUCT DESCRIPTION

Primary human CD138⁺ cells have been isolated from adult bone marrow (BM) using immunomagnetic separation techniques and are cryogenically preserved. Pelleted cells cannot be used for any cell culture purposes, but they can be used for extraction of cellular fractions and nucleic acids.

CATALOG #ABM029P

1 million cells



SAMPLE COLLECTION AND PROCESSING

BM is drawn from the posterior iliac crest, 25 mL/site, from a maximum of 4 sites/donor. BM is diluted with PBS containing heparin (125 U/mL of BM).

Mononuclear cells (MNCs) are first obtained by light density separation of freshly collected samples (1:2 dilution in PBS and centrifugation over Ficoll-Paque™). CD138⁺ cells are then isolated from the MNC population by positive selection using immunomagnetic cell separation procedures. After isolation, the BM plasma cells are washed twice with PBS, centrifuged, and the pellet is snap frozen, then stored at -80°C.

PURITY

The purity of CD138⁺ cells is greater than 75% by flow cytometric analysis. Please see the flow cytometry plot in the accompanying *Certificate of Analysis* for lot-specific purity.

STABILITY AND STORAGE

Cryopreserved samples are stable at -135°C or colder, or in liquid nitrogen for 6 months following date of receipt. Short-term storage of cells at -80°C (<1 month) is acceptable, but should be minimized to ensure maximum stability. Thawed samples must be used immediately.

THAWING INSTRUCTIONS

1. Warm desired medium in a 37°C water bath. Suggested medium: IMDM, DMEM, or RPMI-1640, all containing 10% FBS. (v/v; final concentration).
2. Clean the outside of the frozen vial of cells with 70% alcohol before thawing.
3. In a biosafety hood, twist the cap a quarter-turn to relieve internal pressure and then re-tighten the cap.
4. Thaw the vial of frozen cells in a 37°C water bath. Remove the vial from the water bath immediately after it has thawed. Wipe the outside of the vial with 70% alcohol. **Do not vortex cells during thawing. It is important to work quickly from this point onwards to ensure high viability and recovery.**

Ficoll-Paque™ is a trademark of GE Healthcare.

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5. Gently invert vial to mix cells.
6. In a biosafety hood, measure the volume of the cell suspension, for use in calculating the total starting cell concentration.
7. Aseptically remove a 10 µL aliquot of cells from the vial for counting. A separate person should proceed with **Counting Instructions**.
NOTE: This counting step is necessary to confirm the number of cells provided. Two people are required to carry out both the thawing and counting as these steps must be performed simultaneously.
8. Aseptically transfer the cell suspension to a 50 mL conical tube containing DNase I (Catalog #07900) to prevent cell clumping. For purified cells, a total of 100 µg of DNase I is recommended per mL of cell suspension; for mononuclear cells add 300 µg of DNase I (per mL of cells). DNase I is not required if the cells will be used for subsequent DNA or RNA extraction.
9. Rinse the vial with 1 mL desired medium to recover the remaining cells and slowly add this medium drop-wise to the cells in the 50 mL tube while gently swirling the tube. This should be done at a rate of approximately 1 drop every 5 seconds in order to ensure high viability.
10. Slowly add desired medium (from Step #1) to the cells until the final volume is 15 - 20 mL. Replace the cap and gently invert to mix.
11. Centrifuge the cell suspension in a swinging bucket rotor in a benchtop centrifuge at 200 x g at room temperature for 15 minutes.
12. Carefully remove the supernatant with a pipette, leaving a small amount of medium behind to ensure cell pellet is not disturbed. Gently resuspend cell pellet by tapping the edge of the tube.
13. Fill the tube with 15 - 20 mL of desired medium, replace the cap and gently invert to mix.
14. Centrifuge the cell suspension at 200 x g at room temperature for 15 minutes.
15. Carefully remove supernatant with a pipette, leaving a small amount of medium behind to ensure that the cell pellet is not disturbed.
16. Gently flick the tube to resuspend the cell pellet and add the desired volume of medium to cells for further

experiments. The cells in this product are not to be used for cell culture.

WARNING

This product contains human material and must be treated as a potentially infectious and contaminated biological specimen, even if available serological reports are negative. Cells should be handled at Biosafety Level 2 (BSL-2) or higher. Universal handling precautions for biological samples should be used. For more information, please see your site Safety Officer or contact us at techsupport@stemcell.com.

PRODUCT WARRANTY

STEMCELL Technologies warrants primary cell products to meet the claimed product specifications, including viable cell number and purity, when the recommended protocols are followed. STEMCELL assures its cells to be viable and cell numbers recovered to be accurate, when handled exactly according to our instructions for thawing and counting. STEMCELL cannot guarantee biological function or any other properties associated with performance of cells in researchers' individual assay or culture systems.

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WARNING

We do not recommend the storage of frozen cell products in the liquid phase of a liquid nitrogen storage tank. Liquid can enter closed screw top cryovials, which then have the potential to explode due to internal pressure when removed from storage.

RECOMMENDED FROZEN CELL STORAGE CONDITIONS

For short-term storage (<1 month), store cells in -80°C freezer.

For long-term storage (>1 month), store in the vapor phase of a liquid nitrogen storage tank.

STORAGE PRECAUTIONS

WARNING: We do not recommend the storage of frozen cell products in the liquid phase of liquid nitrogen (LN₂). Liquid can enter closed screw top cryovials, which then have the potential to explode when removed from storage.

Our warranty does not cover any losses or damages of any kind due to storage of products in the liquid phase of LN₂.

Laboratory personnel should use extreme caution when storing samples in LN₂. LN₂ storage consists of a liquid phase and a gaseous phase. If cryovials are immersed in the liquid phase, LN₂ can enter the closed screw-top cryovials during storage. The cryovial may then explode when it is removed from storage due to the vaporization and expansion (700x expansion ratio) of the liquid nitrogen inside the cryovial.

HEALTH HAZARDS OF LIQUID NITROGEN

Liquid nitrogen has a 700x expansion ratio, which may cause physical hazards and injuries due to the explosion of cryovials, containers, equipment, or other devices. Extensive tissue damage or burns can result from exposure to LN₂ or cold nitrogen vapors. Asphyxiation may result from the displacement of oxygen in the air with nitrogen to levels where there is insufficient oxygen. Inhalation of oxygen deficient air can cause dizziness, nausea, vomiting, loss of consciousness, and death.

PERSONAL PROTECTIVE EQUIPMENT

The following personal protective equipment is recommended when handling or using LN₂:

Cryo gloves/Waterproof thermal insulated gloves

- Hands should be protected with waterproof thermal insulated gloves that can be quickly removed if LN₂ is spilled on them. These gloves are not intended for submersing hands into LN₂.

Clothing

- Body must be protected with pants, lab coats, and closed-toe shoes.

Face Shield

- Eyes are sensitive to the extreme cold of LN₂ and its vapors. Over-pressurization may result in the explosion of improperly stored cryovials. Chemical splash face shields should be used when handling LN₂ and when handling cryovials and other sealed containers that have been stored in LN₂.

The handling of cryovials inside of Biological Safety Cabinets (with the sash lowered) will further reduce the risk of injury from explosions caused by excess pressure within the vial. We recommend that excess pressure be relieved by briefly opening the cap of the cryovial a quarter turn before resealing. This should be done inside a Biological Safety Cabinet.