

MesenCult™-ACF Freezing Medium



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Catalog # 05490

50 mL

Product Description

MesenCult™-ACF Freezing Medium is a defined, serum-free, and animal component-free medium for the cryopreservation of mesenchymal stem and progenitor cells (MSCs). This complete and ready-to-use medium is recommended for human MSCs previously cultured in MesenCult™-ACF Medium (Catalog #05440), MesenCult™-XF Medium (Catalog #05420), or MesenCult™ Medium (MesenCult™ Proliferation Kit; Catalog #05411). Frozen human MSCs should be stored at -135°C (liquid nitrogen) or colder.

- Defined, serum-free, and animal component-free
- Reproducibly high recovery rates
- Optimized for MSCs previously cultured in MesenCult™-ACF, MesenCult™-XF, or MesenCult™ medium
- Preserves human MSC multipotency and expansion capacities
- Convenient, ready-to-use format

Properties

Storage: Store at 2 - 8°C.

Shelf Life: Stable until expiry date (EXP) on label.

Contains: Dimethyl sulfoxide (DMSO)

Please refer to the Safety Data Sheet (SDS) for hazard information.

Handling / Directions For Use

FREEZING

1. Wipe the outside of the MesenCult™-ACF Freezing Medium container with 70% ethanol or isopropanol before opening.
2. Prepare a single-cell suspension of human MSCs using the desired dissociation medium (e.g. Animal Component-Free Cell Dissociation Kit; Catalog #05426) and centrifuge cells at 300 x g for 5 minutes to obtain a cell pellet.
3. Carefully remove the supernatant with a pipette, leaving a small amount of medium to ensure the cell pellet is not disturbed. Resuspend the cell pellet by gently flicking the tube.
4. Add cold (2 - 8°C) MesenCult™-ACF Freezing Medium to obtain a cell suspension of 1×10^6 cells/mL and mix thoroughly.
5. Transfer 1 mL of the cell suspension into each cryovial.
6. Freeze cells using a standard slow rate-controlled cooling protocol (approximately -1°C/minute) or an isopropanol freezing container and store at -135°C (liquid nitrogen).

NOTE: Long-term storage at -80°C is not recommended.

THAWING

For complete instructions on culturing MSCs using a specific culture medium, please refer to the Product Information Sheet for the medium (e.g. MesenCult™-ACF; Document #28066, or MesenCult™-XF; Document #29919).

NOTE: When serum-free medium is used, pre-coating of the cultureware is generally required. Cultureware should be prepared in advance according to the supplier's instructions and brought to room temperature (15 - 25°C) for at least 30 minutes prior to use.

1. Warm DMEM/F-12 with 15 mM HEPES (Catalog #36254) and desired culture medium (e.g. MesenCult™-ACF or MesenCult™-XF) in a 37°C water bath.
2. Wipe the outside of the vial of cells with 70% ethanol or isopropanol.
3. In a biosafety cabinet, twist the cap a quarter-turn to relieve internal pressure and then retighten.
4. Quickly thaw cells in a 37°C water bath by gently shaking the vial. Remove the vial when a small frozen cell pellet remains. Do not vortex cells.
5. Wipe the outside of the vial with 70% ethanol or isopropanol.
6. Transfer cells to a 15 mL polypropylene tube (e.g. Fisher Catalog #05-539-5) containing 10 mL of warm DMEM/F-12 with 15 mM HEPES.

7. Centrifuge cells at 300 x g for 5 minutes at room temperature (15 - 25°C).
8. Carefully remove the supernatant with a pipette, leaving a small amount of medium to ensure the cell pellet is not disturbed. Resuspend the cell pellet by gently flicking the tube.
9. Add 2 mL of culture medium to the tube. Mix gently.
10. Plate cells into pre-coated cultureware (e.g. T-75 cm² flask or 6-well plate).
NOTE: In general, one frozen cryovial containing 1×10^6 human MSCs can be successfully thawed into one T-75 cm² flask or plated at 15,000 - 40,000 cells/well of a 6-well plate.
11. Move the cultureware in several quick, short, back-and-forth and side-to-side motions to evenly distribute the MSCs across the surface. Place the cultureware in a 37°C incubator.

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