

Cell-Vive™ CD DMSO-Free Cryopreservation Solution, GMP

Catalog# / Size	420516 / 100 mL
Other Names	Cryo Solution, DMSO-free, Cryopreservation media
Description	<p>Cell-Vive™ CD DMSO-Free Cryopreservation Solution, GMP is recommended to support human Mesenchymal Stem Cell (MSC) cryopreservation in a DMSO-free fashion. It is a chemically-defined formulation prepared without human or other animal-derived components. It is suitable for use in the cryopreservation of different MSC sources, without affecting relevant properties. When used under appropriate conditions, this product can preserve cell viability, expansion, phenotype, and differentiation capacity of MSCs. This GMP product is suggested for use in research and <i>ex vivo</i> cell processing. The benefits of this cryopreservation solution include:</p> <ul style="list-style-type: none"> • DMSO-free and Chemically-defined formulation. • Effective in cryopreserving Human MSCs from multiple sources. • Able to maintain important MSC properties after cryopreservation. • Minimizes safety risks associated with DMSO

Quality Statement	<p>BioLegend Cell-Vive™ GMP cell culture products are manufactured and tested in accordance with USP Chapter 1043, Ancillary Materials for Cell, Gene and Tissue- Engineered Products and Ph. Eur. Chapter 5.2.12 in a dedicated GMP facility compliant with ISO 13485:2016. Specifications and processes include:</p> <ul style="list-style-type: none"> • Low endotoxin level (<1 EU/mL) • Mycoplasma and bacterial/fungal growth testing • Batch-to-batch consistency • Vendor qualification • Raw material traceability and documentation • Documented procedures and employee training • Equipment maintenance and monitoring records • Lot-specific certificates of analysis • QA review of released products • Quality audits per ISO 13485:2016
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Product Details

Formulation	Chemically-defined. Cell-Vive™ CD DMSO-Free Cryopreservation Solution, GMP is a solution ready to use.
Endotoxin Level	< 1 EU/mL
Preparation	DMSO-Free, Chemically-Defined, no preservatives.
Storage & Handling	4°C (2°C - 8°C)
Application	Cryopreservation of Human MSCs - Quality tested
Recommended Usage	Freeze 0.5-5 million cells per 1mL of Cell-Vive™ CD DMSO-Free Cryopreservation Solution, GMP
Application Notes	For cryopreservation, a range between 0.5-5 million cells per 1 mL of Cell-Vive™ CD DMSO-Free Cryopreservation Solution, GMP is recommended. The appearance of the product in liquid form is clear with a slight pink color.

MSCs Cryopreservation protocol:

1. Prepare a MSC suspension following an appropriate protocol.
2. Centrifuge cells at 300 x g for 5 minutes to obtain a pellet. Carefully aspirate supernatant.
3. Resuspend pelleted cells with Cell-Vive™ CD DMSO-Free Cryopreservation Solution, GMP and dispense the cell suspension into a cryovial.
4. Immediately transfer the cryovial into a cell freezing container and store it at -70°C
5. After 24-36 hours, transfer cryovials into a liquid nitrogen tank for long-term storage.

Thawing MSCs protocol:

1. Thaw cryovials containing cells by putting them in a 37°C water bath with very gently swirling. Thaw until only a small ice fragment is present.
2. In a biosafety hood, add 1 mL of preferred cell culture media into the vial and then transfer content into a 15 mL conical tube containing 8 mL of cell culture media at room temperature. Gently mix.
3. Centrifuge and remove the supernatant.
4. Resuspend the cells at the desired density with cell culture media.

Disclaimer

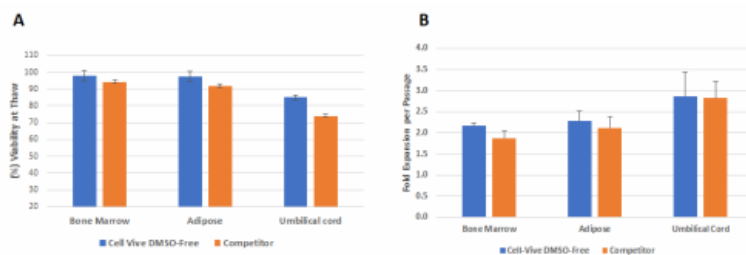
BioLegend Cell-Vive™ GMP Cell Culture products are for research use only. Suitable for *ex vivo* cell processing. Not for injection or diagnostic or therapeutic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

Antigen Details

Gene ID

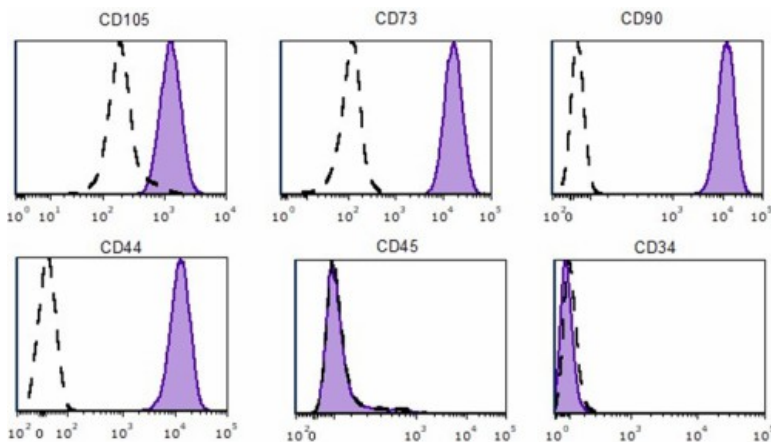
NA

Product Data



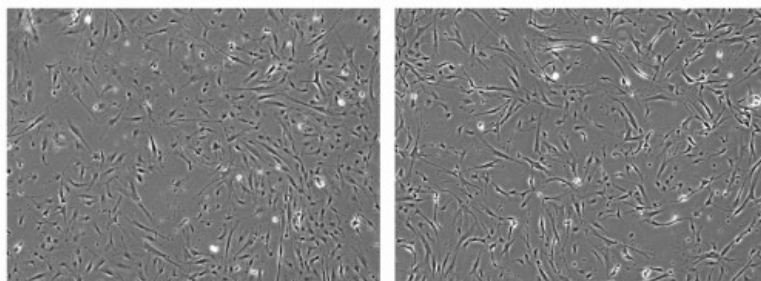
Cell-Vive™ CD DMSO-Free Cryopreservation Solution, GMP preserves Human MSCs viability, and phenotype post-cryopreservation, at similar or higher levels than DMSO solution commonly used (Competitor). After reaching 80% confluency, Human MSCs were detached and stored in liquid nitrogen for two days before thawing. **(A)** Viability at thaw was determined and cell expansion demonstrated through three passages **(B)**.

After three passages following cryopreservation and thaw, the MSC phenotype was analyzed by flow cytometry. Thawed and expanded MSCs maintained phenotype as demonstrated by CD105+, CD73+, CD90+, CD44+, CD45- and CD34- (filled histogram), isotype control (open histogram) markers.

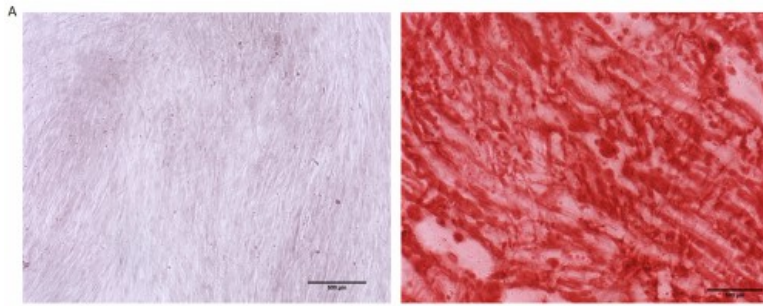


(A)

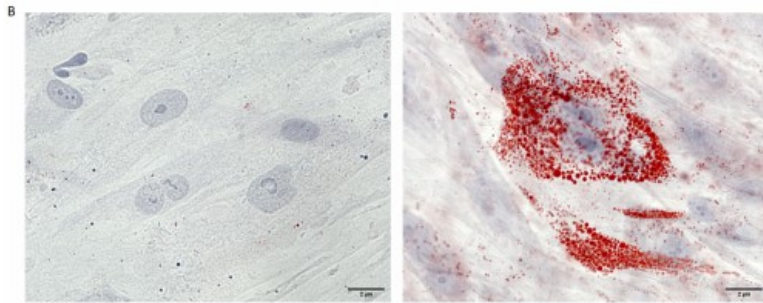
(B)



Cell-Vive™ CD DMSO-Free Cryopreservation Solution, GMP preserves Human MSCs morphology similar to other commonly used DMSO solution. Human bone marrow-derived MSCs were frozen at 500,000 cells/mL in **(A)** Cell-Vive™ CD DMSO-Free Cryopreservation solution or a **(B)** DMSO solution (Competitor). Cells were stored in liquid nitrogen for two days, then thawed and plated at 5,000 cells/cm². Attachment and morphology were observed four days after thawing. Images were taken at 4X magnification.



Cell-Vive™ CD DMSO-Free Cryopreservation Solution, GMP preserves the differentiation capacity of Human Mesenchymal Stem Cells. Human MSCs were stored in liquid nitrogen in the presence of Cell-Vive™ CD DMSO-Free Cryopreservation Solution, GMP for two days. MSCs were thawed and differentiated into (A) osteocytes for nineteen days or (B) adipocytes for twenty-one days with respective differentiation media (right) or cell culture media as a control (left). Osteocytes were stained with Alizarin red and adipocytes with Oil Red O.



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