

ALLCELLS

1301 Harbor Bay Parkway, Suite 200, Alameda, CA 94502
Phone: 510-521-2600; Fax: 510-521-7600
Email: info@allcells.com; Web: www.allcells.com

CERTIFICATE OF ANALYSIS

Catalog Number: ABM001

Product Description: Fresh Bone Marrow, 10mL

Lot Number: BM6673

Donor ID Number: 9349

Date of Aspiration: 09/19/2016

Donor Information:

| Age | Weight | Height | Sex | Race | Blood Type | Smoker? |
|-----|---------|--------|-----|--------------------|------------|---------|
| 28 | 160 lbs | 64 in | F | Non-Hispanic White | O+ | Yes |

| | |
|---------------------------|-------------------------|
| Meds taken within 1 week? | No |
| Donor Virus Testing: | HIV, HBV, HCV: Negative |

QA/QC Tests:

| | Specification | Result |
|--------------------------------------|-----------------|----------------------|
| 1. Volume of pure BM Aspirates/tube: | 10mL | 10mL +80U/mL Heparin |
| 2. Number of WBC: | 1×10^8 | 2.06×10^8 |

(Please Note: WBC refers to total White Blood Cells, or Leukocytes, not Mononuclear Cells. Mononuclear Cells are enriched through the ficolling process of total White Blood Cells and are usually 15-33% of WBC count)

These cells meet all specifications above and were obtained through an IRB approved donor program.

Recommended Storage Condition: Please use product immediately upon arrival.

Products are for *in vitro* research purposes only and are not intended for use in humans. Not for resale without written authorization from AllCells, LLC.

WARNING: In accordance with OSHA and CDC guidelines, all specimens should be handled as though they contain agents infectious to humans and follow appropriate safety control procedures to ensure the safety of using these products.

Mimi Lo

Verified By: Quality Control

Date of Shipment: September 19, 2016

Email: info@allcells.com

website: www.allcells.com



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TERMS AND CONDITIONS

BILLING

All invoices are issued at time of shipment and are payable within 30 days. Invoices not paid within terms are subject to a 10% late fee balance and up to a 1.5% per month (18% annum) interest fee. Any invoices over 120 days old are subject to collection proceedings. Payments should be made to:

Accounts Receivable
AllCells, LLC
1301 Harbor Bay Parkway, Suite 200
Alameda, CA 94502

AllCells herein refers to AllCells, LLC. AllCells accepts only US currency, in the form of company checks, cashier checks, money orders, VISA, or MasterCard payments. All funds must be withdrawable from US bank accounts; foreign bank accounts and/or foreign currency will not be accepted as appropriate payment. Make all checks payable to AllCells, LLC. All international orders must be prepaid in advance with either a bank deposit or credit card before shipping.

ORDERS, CANCELLATION AND RESCHEDULING

1. Once you have placed your order, AllCells will recruit and schedule donors for tissue collection according to your requirements.
2. Orders which are cancelled or rescheduled within 1 week from the scheduled collection time will incur a 10% cancellation/rescheduling fee.
3. Orders may not be cancelled within 24 hours of the scheduled collection time.

RETURN POLICY

Catalog products may not be returned for credit without the express prior written authorization from AllCells, LLC. A Restocking Fee will be applied to returns in which the purchaser is at fault. A Restocking Fee of \$50 or 15% of the purchase price will be applied, whichever is greater. Products shall be returned in their original containers with original AllCells label affixed and unaltered. Returns must be requested within 24 hours of product delivery, stored under the recommended storage conditions, and packaged according to the same conditions as the original shipment. Final acceptance of returned product is at the sole discretion of AllCells, LLC. No returns will be accepted for custom product orders.

DAMAGE IN SHIPMENT CLAIMS

It is your responsibility for claiming any damages in shipment directly from the carrier. You become the owner of the packages once your shipment is released to carrier.

SHIPPING AND HANDLING CHARGES

Actual Shipping & Handling costs are added to the invoice. Shipping & Handling charges vary according to weight and delivery (overnight or same day). Duty fees and taxes are added to all International orders.

PRICES

1. AllCells, LLC prices are subject to change without prior notice. Please call, fax, or e-mail to confirm current pricing with AllCells, LLC.
2. All shipping and handling charges will be reflected on invoice upon delivery of product. Shipping and handling charges will vary according to weight of package and shipping options. Please contact AllCells, LLC directly for current shipping and handling prices.
3. AllCells, LLC prices quoted in our catalog are net prices; sales tax will be included where applicable. All customers located in California are subject to California state sales tax.

RESALE

AllCells products are not permitted for resale or as a source for deriving other cell processing without written authorization from AllCells, LLC.

DISCLAIMER (Read before using)

By ordering any products from AllCells, LLC, you and your company are agreeing to all terms unconditionally as described in this disclaimer. These terms may be changed at any time without notice; please read before each order.

COMPLETE DISCLAIMER OF LIABILITY

The purpose of this document is to alleviate the manufacturer, distributor, and retail outlet of all liability, arising out of any injury caused by the use or misuse of our products.

1. AllCells, LLC represents and warrants that it has (1) obtained the rights with respect to the specimens and that such specimens were provided with the donor's informed consent in compliance with the laws and regulations of such jurisdiction, (2) obtained all necessary and appropriate releases from the donor wherein there are no restrictions on use of specimens that would prohibit customers from using them in any commercial pharmaceutical research conducted *in vitro*, (3) complied with all applicable United States and foreign statutes and their respective rules and regulations in connection for handling, export, import and use of the specimens, (4) no obligation to any third party that would interfere with AllCells, LLC providing specimens to customers and any specimens that AllCells, LLC provides to customers is not the proprietary property of any third party.
2. In no event will AllCells, LLC be liable to a customer or anyone else for any damages or injury by the use or misuse, action taken by a customer relying on information, either verbal communication or literature viewed or purchased through AllCells, LLC, or for any incidental, consequential, special, or similar damages.
3. Customers agree that AllCells, LLC liability, if any, for damages (including liability, arising from physical or mental harm, caused by any products liability, arising out of contract, negligence, strict liability or tort) shall not exceed the cost of the product, which the customer purchased from AllCells, LLC.
4. The Customer agrees to indemnify and to hold harmless, AllCells, LLC and all other parties involved, including their owners, officers, affiliates, associates, and employees for any and all damages incurred as result of the products used. These parties shall not be liable under any circumstances.
5. In no event shall AllCells, LLC be liable under any damages other than the amount paid by the customer for the product. Any damages, direct or indirect, special, incidental, consequential or punitive, are hereby excluded.
6. By ordering any products from AllCells, LLC, the customers acknowledges the above terms, conditions, and disclaimer, included but not limited to the above disclaimers and any additional warnings and cautions. The customer agrees to carefully abide by these terms, conditions, and disclaimers.



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Fresh Whole Bone Marrow

Bone Marrow Unit Size

| |
|-------|
| 3ml |
| 10ml |
| 25ml |
| 50ml |
| 100ml |

Shipping and Storage

Fresh whole bone marrow (BM) is shipped in a conical tube with anticoagulant (Heparin). Bone marrow products are placed in a foam container at room temperature.

CAUTION

The products purchased from AllCells, LLC are "For *In Vitro* Research Use Only." In compliance with U.S. Food and Drug Administration (FDA) Regulations, these products are intended neither for use neither in clinical diagnostic procedures nor in therapeutic procedures.

These products must be:

1. Treated as potentially contaminated biological specimens even if available serological reports are negative.
2. Handled by establishing or following appropriate safety control procedures to ensure the safety of using these products.

Amount of White Blood Cells (WBC) in Bone Marrow

| Tube Size | Median Number of WBC | Range of WBC |
|-----------|------------------------|-------------------------|
| 3ml | 0.73 x 10 ⁸ | 0.3-1.7x10 ⁸ |
| 10ml | 2.4x10 ⁸ | 0.8-5.6x10 ⁸ |
| 25ml | 6x10 ⁸ | 2.1-14x10 ⁸ |
| 50ml | 11.6x10 ⁸ | 4.2-28x10 ⁸ |
| 100ml | 23.3x10 ⁸ | 8.4-5.6x10 ⁸ |

NOTE: The above table is for reference purposes only.

The population of mononuclear cells (MNC) in whole bone marrow is approximately 25-30% of white blood cells.

AllCells is not responsible for the recovery number of MNC or other purified cells. For a specific number of a certain cell type please consider our bone marrow purified products.

How to Isolate:

Bone Marrow Mononuclear Cells

Reagents Required:

- Ficoll-Paque™ PLUS[®] (1.077 density) or Lymphocyte Separation Media
- Washing Buffer: PBS (Ca²⁺ and Mg²⁺ free) with 2 mM EDTA and 10% Fetal Bovine Serum
- Fetal Bovine Serum (FBS)
- Ice
- 0.4% Trypan Blue (to check for dead cells)
- 3% Acetic Acid Methylene Blue

Equipment Required:

- Refrigerated centrifuge
- Biosafety hood (Class II)
- Hemacytometer
- Compound microscope
- 5 to 10ml Pipets
- 10 –200µl pipetman
- 10 – 200µl tips
- 50ml conical centrifuge tubes
- 40µm mesh nylon strainer (Becton Dickinson Biosciences, REF 352340)

The following process:

- Should be carried in the sterile hood (Class II) to avoid bacterial contaminations.
 - Is for MNC isolation in 50ml conical centrifuge tubes.
1. The BM product is shipped to you at room temperature. It is highly recommended to store the BM product at room temperature before MNC isolation.
 2. Before MNC isolation, a methylene blue count should be performed on the whole BM product to determine the number of WBCs in the sample (please refer to AllCells' *How to Count Fresh Cells* product insert).
 3. Place the cell strainer on top of a sterile 50ml conical tube.
 4. Wet the strainer using 1 ml PBS.
 5. Slowly, run the bone marrow through the strainer.
 6. Wash the strainer with 5-10 ml of PBS (without exceeding appropriate dilution ratio); discard the strainer.
 7. Bring your bone marrow cell suspension up to a 1:2 (bone marrow: PBS) into 50ml conical tubes. Dilute every 10ml of our bone marrow product with 20ml of PBS.
 8. Invert the tube several times. Carefully and *slowly*, under-ly 14ml of room temperature Ficoll-Paque into each tube. Avoid creating air bubbles in the Ficoll layer.
 9. Centrifuge for 30 minutes at 400xg (1300 rpm for Beckman Coulter™ Centrifuge) at 25°C in a swinging-bucket rotor (without brake).
 10. Remove the upper layer, leaving the mononuclear cell layer undisturbed at the interphase;
 11. Carefully collect interphase cells and a small part of the cells underneath the interphase into a sterile 50 ml conical tube.
 12. Spin down at 1700xg (3000 rpm for Beckman Coulter™ Centrifuge) at 4°C for 10 minutes, no brake.
 13. Remove the supernatant.
 14. Resuspend the cells with 5 ml of cold washing buffer using a 5ml Pipetman; fill the tube up to 50ml with cold washing buffer.
 15. Count the cells.
 16. Spin down at 200xg (1000 rpm for Beckman) at 4°C for 10 minutes without brake.
 17. Resuspend the cell pellet with proper culture media and count the cells. Adjust the MNC concentration with proper culture media and proceed to your experiment.

How to Freeze Mononuclear Cells

Reagents Required:

- Washing Buffer: PBS (Ca²⁺ and Mg²⁺ free) with 2 mM EDTA and 10% Fetal Bovine Serum
- Cryosor™ CS5
- Fetal Bovine Serum (FBS)
- Ice

Equipment Required: