**Product Description**

Human peripheral blood mononuclear cells are collected using the Spectra Optia® Apheresis System. Acid citrate dextrose (ACD-A) is used as the anticoagulant. Mononuclear cells are enriched from the Leukopak® using an RBC lysis protocol.

Fresh products have a high viability without the detrimental effects of freezing, thawing, and exposure to cryoprotectants.

Cells were obtained using Institutional Review Board (IRB) approved consent forms and protocols.

**Sample Collection and Processing**

All samples are collected at our Stem Cell Collection Center. Apheresis products contain ACD-A. Samples are then quickly processed in our on-site laboratory to achieve maximum viability and quality.

Infectious disease testing for HIV, HBV, and HCV is performed on a sample of donor blood. Only samples with negative results within 90 days of collection are shipped unless approved by the customer. All testing is performed by a CLIA-certified lab.

**Format**

Fresh PB MNCs are stored in PBS with 5% FBS and 0.5% BSA. Cells are shipped on wet ice.

Specific containers and media can also be prepared as requested by the customer.

**Storage**

Fresh products should be used or processed immediately upon receipt. The warranty only covers items whose specifications are tested at the time they are received.

**Cell Counting Instructions**

Important: This cell viability/counting step is required to ensure the quantity of cells provided. Be sure to count the cells before washing. Be aware that cell loss is expected and may be up to 30% during wash steps. Recovery rates vary depending on technique.

**Materials**

- Cleaned hemocytometer
- Trypan Blue

**Protocol**

1. If removing the cell suspension from the vial in which it was shipped, be sure to rinse the vial to collect all of the cells.
2. Gently mix the cell suspension and measure the volume.
3. Make a 1-in-2 dilution with 20 μL each of well-mixed cell suspension and Trypan Blue.
4. Load one side of the hemocytometer, being careful not to over- or under-fill the chamber.
5. Count viable (clear, round, bright) and non-viable (blue, irregular shape, dull) cells in the four corner squares. Adjust your dilution if there are more than 100 cells/square.
6. Determine the number of total viable cells in the original sample. One square is equal to 100 nL.

   Viability = live cells/all cells
   
   Cell Concentration = Mean cells/square × Dilution Factor × 104
   
   Total Cell Count = Cell Concentration × Starting Volume
   
   Total Viable Cell Count = Total Cell Count × Viability

**Warning**

This product contains human tissue or other biological material and MUST be handled at Biosafety Level 2 or higher. All biological products should be treated as potentially infectious or contaminated material, even if infectious disease screening reports are negative. Follow universal precautions and wear appropriate personal protective equipment.

**Product Warranty**

For our product warranty, please review our Terms and Conditions at stemexpress.com/terms-and-conditions/.

**FOR RESEARCH USE ONLY. NOT APPROVED FOR HUMAN OR VETERINARY USE IN VIVO.**