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Fresh Product

Peripheral Blood Monocyte-Derived Macrophages

Catalog# PBMAC001.5F 1.5 million cells

Product Description

Human Peripheral Blood Monocyte-Derived Macrophages are derived from negatively selected monocytes.

Peripheral blood mononuclear cells are collected using the Spectra Optia® Apheresis System. Non-monocytes are depleted from the mononuclear cell population using immunomagnetic particles leaving purified, untouched monocytes. The untouched monocytes are cultured for 4-5 days with 10% FBS in the presence of M-CSF and IL-4. After culture, cells are checked for the expression of specific markers. Cultured monocyte-derived macrophages express CD11b, CD18, CD68 and HLA-DR.

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 on-site at our Stem Cell Collection Center. Apheresis donors are transfused with ACD-A during the collection process. 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. All testing is performed by a CLIA-certified lab.

Format

Freshly isolated cells are stored in PBS with 5% FBS and 0.5% BSA. We normally ship isolated cells on wet ice, but we can also use gel packs at the customer's request. These techniques minimize cellular damage during transportation while helping to ensure the viability you need.

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/.

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