

# Diseased Human Peripheral Blood Leukopak, Diabetes, Type I

Primary human cells, fresh

**Catalog #200-0751** Full Size

**Catalog #200-0760** Half Size

## Product Description

Type 1 diabetes (T1D), also known as juvenile or insulin-dependent diabetes, is an autoimmune disorder where the pancreas produces little to no insulin due to immune-mediated destruction of insulin-producing islet cells, particularly  $\beta$  cells. Samples from donors with T1D may be used to study the pathophysiological mechanisms and disorder-specific processes.

Leukapheresis is performed on donors with T1D using Institutional Review Board (IRB)-approved consent forms and protocols. Approximately two to three blood volumes are processed using the Spectra Optia<sup>®</sup> Apheresis System to produce a full-sized Leukopak.

**Donor Status:** Diseased - Autoimmune & Inflammatory

**Characterization Criteria:** Age, Cell Count, Diagnosis Date, Donor Viral Testing, Ethnicity, Height, Other Information, Smoking Status, Viability

**Product Format:** Product is drawn directly into a sample collection bag containing anticoagulant.

**Anticoagulant:** Acid-citrate-dextrose solution A (ACDA)

For donor details, refer to the lot-specific Certificate of Analysis.

## Stability and Storage

Product is shipped in a refrigerated temperature-controlled box and should be used or processed immediately upon receipt.

## Precautions

Donor Screening: Donors are screened for HIV-1, HIV-2, hepatitis B, and hepatitis C.

If the donor has been screened within 90 days of donation, the product will be shipped with negative test results from donor screening.

If the donor has not been screened within 90 days of collection, a test sample will be taken at the time of donation and the product will be shipped before the screening results are available. In the unlikely event that a test result is positive, the customer will be contacted as soon as possible (usually within 2 - 4 business days from the time of shipment).

Donors have been tested and found to be negative for HIV-1, HIV-2, hepatitis B, and hepatitis C prior to donation. As testing cannot completely guarantee that the donor was virus-free, THIS PRODUCT SHOULD BE TREATED AS POTENTIALLY INFECTIOUS and only used following appropriate handling precautions such as those described in biological safety level 2. When handling this product, do not use sharps such as needles and syringes.

STEMCELL cannot guarantee the biological function or any other properties associated with performance of cells in a researcher's individual assay or culture systems. STEMCELL assures the cells will meet the specifications only when assessed, before washing, by our test methods.

FOR IN VITRO RESEARCH USE ONLY. NOT APPROVED FOR DIAGNOSTIC, THERAPEUTIC, OR CLINICAL APPLICATIONS. NOT APPROVED FOR HUMAN OR VETERINARY USE IN VIVO.

## Directions for Use

**IMPORTANT:** To determine the number of cells provided, a cell count must be done upon receipt and before any processing steps (e.g. washing). Cell loss is expected during wash steps and may be up to 30%. Use sterile technique when processing cells.

Remove a 20 µL aliquot of cells for counting. Appropriately dilute in Trypan Blue (to assess viability) or 3% Acetic Acid with Methylene Blue (to assess nucleated cells). For most Leukopak samples, a dilution of 1 in 100 is sufficient. Adjust the dilution if there are more than 100 cells per square of the hemocytometer. See Notes and Tips section for more details on performing cell counts with a hemocytometer.

Platelet and red blood cell (RBC) levels will vary between samples, and further processing may be required prior to use in downstream applications (e.g. slow spins to remove platelets, RBC lysis, or density gradient separation). See Notes and Tips section for an optional RBC Lysis and Platelet Removal protocol (after diluting and centrifuging the sample).

**NOTE:** SepMate™ tubes are not intended for use with leukapheresis samples.

SepMate™ (IVD) is available as an in vitro diagnostic (IVD) device in certain regions with an intended use of isolating mononuclear cells (MNCs) from whole blood or bone marrow by density gradient centrifugation. SepMate™ is manufactured under a cGMP quality management system compliant with 21 CFR 820. In all other regions, SepMate™ is available for research use only (RUO).

## Notes and Tips

For a protocol on performing total nucleated cell counts using a hemocytometer, refer to <https://www.stemcell.com/how-to-count-cells-with-a-hemocytometer.html>

For a protocol on RBC Lysis and Platelet Removal, refer to "How to Process a Leukopak for Downstream Cell Isolation" (Part II: Prepare Leukopak Contents, Option 2), available at <https://www.stemcell.com/leukopak-processing-protocol.html>.

For information on cell isolation from Leukopaks, refer to [www.easysep.com](http://www.easysep.com).

## Accessory Products

- 3% Acetic Acid with Methylene Blue (Catalog #07060)
- Ammonium Chloride Solution (Catalog #07800)
- Hausser Scientific™ Bright-Line Hemocytometer (Catalog #100-1181)
- Lymphoprep™ (Catalog #07811)
- Trypan Blue (Catalog #07050)

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