

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 diabetes or insulin-dependent diabetes, is an autoimmune disorder where the pancreas produces little to no insulin as a result of the immune system impacting a large number of insulin-producing (islet) cells, specifically beta cells. Samples from donors with T1D may be used to study the pathophysiological mechanisms and disorder-specific processes.

Leukapheresis is performed on type 1 diabetes donors using Institutional Review Board (IRB)-approved consent forms and protocols. Approximately two to three blood volumes are processed using the Spectra Optia[®] 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 at 2 - 8°C 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.

NOTE: SepMate™ tubes are not intended for use with leukapheresis samples. SepMate™ IVD is only available in select regions where it is registered as an In Vitro Diagnostic (IVD) device for the isolation of mononuclear cells (MNCs) from whole blood or bone marrow by density gradient centrifugation. In all other regions, SepMate™ is available for research use only (RUO).

Notes and Tips

For a protocol on processing a Leukopak, refer to <https://www.stemcell.com/technical-resources/leukopak-processing-protocol.html>

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 performing ammonium chloride lysis, refer to the Product Information Sheet for Ammonium Chloride Solution (Catalog #07800).

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 #07801)
- Trypan Blue (Catalog #07050)

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