

Cryopreserved Product

Peripheral Blood Leukopak

Catalog#	LE010C	1.0x10 ¹⁰ cells
	LE005C	5.0x10 ⁹ cells
	LE002.5C	2.5x10 ⁹ cells

Product Description

Human peripheral blood Cryopreserved Leukopaks contain an enriched population of leukocytes (white blood cells) with minimal red blood cells and platelets frozen in a cryoprotective agent.

Product Code	Cassette Size (mm) (L x W)	Bag Size (mm) (L x W)	Overwrap Bag (mm) (L x W)	Fill Volume (mL)	Total Nucleated Cells
LE010C	273 x 140	220 x 120	285 x 130*	130	1.0x10 ¹⁰
LE005C	273 x 140	205 x 120	260 x 130	65	5.0x10 ⁹
LE002.5C	188 x 140	150 x 120	215 x 130	32.5	2.5x10 ⁹

*Overwrap bags are trimmed to fit cassette.

Donors

Leukopaks are collected from healthy donors that have signed informed consent forms approved by the Institutional Review Board (IRB). Donors are screened within 90 days of collection for HIV-1, HIV-2, hepatitis B, and hepatitis C. Only samples from donors with negative test results are shipped unless approved by the customer. All testing is performed by a CLIA-certified lab.

Sample Collection and Processing

All samples are collected on-site at our StemExpress Collection Centers. Leukopaks are generated using the Spectra Optia® Apheresis System, a leukapheresis system that extracts leukocytes from the blood while returning other blood components, such as red blood cells and platelets, to circulation. Leukapheresis donors are transfused with acid citrate dextrose, solution A (ACD-A) during the collection process to prevent coagulation of the final product. 2x Total Blood Volume (TBV) from each donor is processed per full leukopak.

Leukopaks are carefully frozen in a medium containing the cryoprotective agent CryoStor™ CS10 (10% DMSO) using a controlled rate freezer to ensure maximum viability. Each Leukopak comes in a cryobag encased in a sealed sterile overwrap bag and placed in an aluminum cassette. Cryopreserved Leukopaks are stored in the vapor phase of liquid nitrogen at -135°C or colder until the time of shipment.

Storage and Stability

Cryopreserved Leukopaks should be stored in the vapor phase of liquid nitrogen at -135°C or colder for optimal viability. Storing Leukopaks in liquid nitrogen can lead to the breakage of the cryobag and potential cross-contamination with other products. Cryopreserved Leukopaks are stable for up to 3 months when stored in the vapor phase of liquid nitrogen.

The temporary storage of 1-2 days at -80°C should maintain cell viability but is not covered by StemExpress' warranty.

Thawing Instructions

Protocol

1. Warm thawing medium in a 37°C water bath. We recommend a thawing medium of RPMI + 10% heat-inactivated fetal bovine serum (FBS).
2. Place the cryobag in a 37°C water bath. The time taken to thaw the cells will vary depending on the volume within each cryobag. Be careful not to submerge the ports on the cryobag.

Note: Perform this step immediately after removing the cryobag from the dry ice in the shipment or after removing the cryobag from your liquid nitrogen storage.

3. Remove the cryobag from the 37°C water bath when small ice crystals remain.

Note: Prolonged exposure to heat will damage the cells and increase cell death.

4. Remove the cryobag from the water bath to a biosafety hood. Clean the outside of the cryobag with 70% ethanol.
5. Cut a port on the cryobag with sterile scissors and slowly add an equal volume of thawing medium using a syringe to the cryobag.

Note: Adding thawing medium slowly is gentler on stressed cells and can help increase cell viability. Avoid any type of agitation to the cells.

6. Gently transfer cells to a 500 mL container. Leave enough extra volume for the addition of the thawing medium.
7. Add 3-4 times the volume of thawing medium dropwise to the 500 mL container.
8. (Optional) Rinse the cryobag with 25 mL warm thawing medium and transfer to the container.

Note: Rinsing the cryobag will help recover the remaining cells.

9. Use a small aliquot to determine viability and cell count.
10. Transfer cells to 50 mL conical tubes using a 25 mL pipette.
11. Centrifuge the 50 mL conical tubes at 300 x rcf for 10 min (accel 5, brake 0).
12. Remove the supernatant and gently resuspend the cells using a total of 40 mL Buffer and combine the cells.
13. Gently swirl the cell suspension to make sure cells are equally distributed in the solution. Failure to mix well will result in inaccurate cell counts and viability testing.

Note: Do not use a vortex mixer to resuspend cells. This will damage the cells and decrease viability.

14. Use a small aliquot to determine cell viability and cell count.

Note: It is important to check the viability of your cells, as low viability can interfere with downstream applications.

15. Depending on the sensitivity of the cell type, allow them to recover in appropriate medium for 24hrs.

Refer to our Frequently Asked Questions at stemexpress.com/faqs/ to access our online Thawing Protocol or visit: <https://stemexpress.com/product/leukopak-frozen/> under Technical Resources

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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