

Fresh Product

Whole Cord Blood

Catalog#	CBCPD010F	1x10 ⁹ TNCs
	CBCPD005F	5x10 ⁸ TNCs
	CBCPD002.5F	2.5x10 ⁸ TNCs

Product Description

Human whole umbilical cord blood contains the anticoagulant citrate phosphate dextrose (CPD).

Donors

Umbilical cord blood is collected from donors that have signed informed consent forms approved by the Institutional Review Board (IRB). A sample of the cord blood is screened 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 at nearby partner hospitals or clinics. Whole umbilical cord blood is needle aspirated from the umbilical cord vein into a cord blood collection bag containing 35 mL of CPD. The cord blood is sent to our StemExpress laboratory where it is processed to mononuclear cells via density gradient and further processed by immunomagnetic selection to a specific cell type.

Format

Umbilical cord blood contains 35 mL of CPD.

Storage and Stability

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

It is highly recommended to use an automated cell counter to check for an accurate count and viability. If an automated counter is not available, the following counting protocol can be used.

Important: This cell viability/counting step is required to ensure the quantity and quality 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. Gently mix the cord blood and measure the volume.
2. Remove a small aliquot and lyse the red blood cells.
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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