



# PRODUCT CATALOG

## 2013-2014

Sustaining Quality of Life Through Research™

A large, detailed microscopic image of cells, likely stem cells, showing their complex, spiky surface structure. The image is rendered in shades of blue and white, with a bright blue background. The cells are the central focus of the lower half of the page.

**THE PURITY, VIABILITY  
& QUALITY YOU  
NEED™**

# STATEMENT OF ETHICAL STANDARDS

The team at StemExpress, LLC, commit ourselves to the following principles, which we recognize are standards of ethical behavior and excellence in practice that are fundamental to all activities in biotechnology:

## Respect for Human Individuals and the Public Good

We recognize that all humans have inherent dignity, rights, beliefs and perceptions that cannot be sacrificed for scientific or economic benefit. The public good is a collective good that should always be taken into account. StemExpress is committed to ensuring that this respect is rooted in all that we do.

## Respect for the Environment

We recognize the importance of the moral relationship between humans and our natural environment. The caretaking and safeguarding of the environment is always taken into consideration in our daily activities. The StemExpress Corporate Office and Laboratory are located in a Gold-Rated LEED™ Certified Green Building. We are also committed to recycling and keeping our environment clean and safe.

## Benefit and Harm

We believe all activities have social, economic and environmental impacts. The team at StemExpress strives to create a positive impact in these areas and on the scientific research community as a whole. All of our activities are aimed at promoting good and avoiding harm.

## Integrity and Accountability

We believe that our activities should be conducted honestly, truthfully, lawfully, impartially, competently and with considered regard for transparency of processes. We recognize that as individuals and as an institution, we are responsible for our actions; therefore, we rely on our proven protocols, policies, and operating procedures. The principles noted in each of these provide guidance for the application of ethical behavior in our work as members of the biotechnology community.

## Our Values

**Teamwork** – We support one another and work together, valuing the worth that people, as individuals, bring to the organization.

**Integrity** – We will demonstrate honest, positive, ethical behavior in dealing with our customers, vendors, employees, affiliates and the communities in which we do business.

**Community** – We value the communities in which we do business and will endeavor to always have a positive impact on such communities.

**Quality Services** – We take pride in our work and develop our talents, skills and abilities in order to benefit our customers and contribute to the overall environment of our workplace.

**Financial Responsibility** – We will spend all our resources wisely, with an eye on long term growth, investing in our future and being wise stewards of our resources.

**Innovation** – We will continuously strive to develop new products and new methods and means of production to continuously improve both the quality of our final product and the efficiency of our production methods. We will always welcome new insights, new techniques and new ideas, fostering a climate of thoughtful change.

Greetings:

This has been a fun and exciting year for StemExpress! I am pleased to present you with our new and improved catalog for 2013-2014. This catalog is busting at the seams with all the new products you've asked for. New to our catalog are bone marrow, Leuko Paks, and diseased samples to name a few. As always we want to work with you on your custom projects. StemExpress has truly made a name for itself in this area because most requests can be met and our prices are reasonable.

The addition of new products is not the only area of growth we have experienced. Relocating our main headquarters into a new state-of-the-art facility added 17,000sqft to our workspace. The team has grown by 30%, recruiting people from companies such as Genentech and Telik. We added an on-site procurement center specializing in the collection of leukapheresis and bone marrow. Continuing to be an industry leader in procurement, we realized exponential growth with regard to human tissues such as cadaverous tissue, umbilical cord blood, diseased tissue and tumors. Finally, StemExpress is now the largest provider of maternal blood and fetal tissue globally!

Through all of this growth one thing has remained the same, our commitment to science. **Sustaining quality of life through research** continues to be our main priority here at StemExpress. One way we accomplish this is by offering special discounts to the academic community. Additionally, by providing clinical trial supportive services and materials to the research community, scientists have the ability to focus on treatment plans and solutions.

On behalf of myself and the StemExpress team, we look forward to supplying you with products that provide you with **the purity, viability & quality you need.**

A handwritten signature in black ink, appearing to read 'Cate Dyer', with a long horizontal flourish extending to the right.

Cate Dyer, CEO

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# ABOUT STEMEXPRESS

StemExpress is a global biotechnology company that was founded in May of 2010. **We have the largest variety of raw materials available in the industry.** Combined with our access to raw material, StemExpress is also your one stop location for fresh, fixed and cryopreserved human primary cells. Our human tissue products range from fetal to adult tissues and healthy to diseased samples. We also collect bone marrow and leukapheresis for isolation. In our state-of-the-art laboratory, primary human somatic, progenitor, and stem cells are isolated and cultured. Using the most up to date technology we guaranty every sample delivers the **purity, viability & quality** your investigators need.

StemExpress procures specimens from various hospitals and clinics throughout the United States. We are licensed and/or certified in accordance with local, state and federal requirements. Our IRB approved protocols and consents protect you as well as our donor's privacy in accordance with HIPAA guidelines. The StemExpress team takes pride in being researcher oriented and our goal is to build strong, responsive, and long-lasting relationships with our clients. By partnering with StemExpress, we can reduce the time your team spends isolating cells or collecting raw materials. **Let us take your research to the next level.**



# ABOUT STEMEXPRESS

## Whole Blood and Leuko Paks

At our on-site donation center, phlebotomists are able to collect 10-500mL of whole blood from a wide variety of donors. Healthy and diseased donors can be scheduled specifically for your project requests. Our Leuko Paks are a concentrated collection of mononuclear cells collected from healthy donors. For the Full Leuko Pak, approximately three blood volumes are processed using the Spectra Optia® Apheresis System and between 200-300mL of plasma can be procured at the same time as the mononuclear cells.

## Maternal Blood

StemExpress has become the largest provider of maternal blood globally. With volumes that range from 150-200 samples per week, projects can be scheduled to meet your needs and we can collect samples from every type of ethnicity and gestation needed. Additionally, matched blood and tissue samples for prenatal and genetic research are available.

## Umbilical Cord Blood

StemExpress is IRB approved to collect Therapeutic and Non-Therapeutic umbilical cord blood specimens. Cord blood is collected from numerous hospitals and clinics throughout the United States and same day delivery can be provided within most areas of Northern California. We can customize cell isolation to meet your needs and provide fresh or frozen human primary cells.

## Human Tissue

StemExpress has the largest variety of raw materials available in the industry. Human tissues range from fetal to adult tissues and healthy to diseased samples. Cadaverous samples can also be provided. We isolate cells from most of these tissues and provide those cells either fresh or cryopreserved. For an extensive list of all of the tissues we offer please log on to our website at [www.stemexpress.com](http://www.stemexpress.com)

## Bone Marrow

Our board certified physicians collect bone marrow at our on-site donation center. Local anesthetic is used on the extraction site to numb the area. A needle is then inserted into the pelvic bone and a small sample of bone marrow is extracted. Procured bone marrow is immediately taken to our laboratory where our lab technicians are able to isolate cells within minutes of collection.

## Human Primary Cells

Offering a wide range of human primary cells, StemExpress has the largest variety of fresh cells available in the industry. Functioning out of a state-of-the-art laboratory that uses the latest technology allows us to guaranty every sample delivers the **purity, viability & quality** your investigators need. These human cells are made available through our numerous internal sources. Our healthy human cells are sourced from peripheral blood, bone marrow, cord blood, fetal liver, amniotic/placental fluid, adipose, dental pulp and skin to mention a few.

## Donor Criteria

Each donor is pre-screened for general health, HIV and Hepatitis B and C. In addition to being aware that their blood and/or tissue will be used for medical research purposes, all of our donors sign an IRB approved informed consent form. Procurement involves complete anonymity for the individual who is donating. Random generated numbers are used to track our blood and tissue specimens and there are no identifiers that can be traced back to the donor. HIPPA guidelines are strictly adhered to which protects the donor's privacy.

# ORDERING & DELIVERY INFORMATION

## Contact Information

<b>Phone Toll Free</b>	<b>530.626.7000 877.900.STEM (7836)</b>
<b>Fax</b>	<b>530.626.7900</b>
<b>Email</b>	<b>info@stemexpress.com</b>
<b>Website</b>	<b>www.stemexpress.com</b>

## Address

778 Pacific Street  
Placerville, CA 95667

## Office Hours

Monday through Friday  
8:00am to 5:00pm PST

## Lead Times

<b>Product</b>	<b>Fresh</b>	<b>Frozen</b>
Peripheral Blood Leuko Paks and Leuko Pak Derivatives	2 weeks	1-2 days
Bone Marrow	2 weeks	
Cord Blood	1 week	
Tissue	1 week	



# ORDERING & DELIVERY INFORMATION

Cell Type	Fresh	Cryopreserved	Delivery Method
<b>Whole Tissue</b>	Collected into a conical tube with RPMI 1640 and shipped ambient	Shipped on dry ice	<p><i>Delivery is based on the client's needs. A variety of options, including same day delivery by courier and FedEx overnight are available.</i></p>
<b>Plasma/Platelets</b>	Shipped ambient	Snap frozen and shipped on dry ice	
<b>Whole Blood</b>	Drawn into a blood bag or collection tubes and shipped ambient	N/A	
<b>RBC</b>	Collected into a 50mL conical tube with DPBS + 10% FBS and shipped on wet ice	N/A	
<b>Mononuclear Cells</b>	Collected into a 50mL conical tube with DPBS + 10% FBS + 2mM EDTA and shipped on wet ice	Frozen cells are stored in CryoStor CS10 in the vapor phase of liquid nitrogen and shipped on dry ice	
<b>Purified Cells</b>	Collected into a 50mL conical tube with DPBS + 10% FBS + 2mM EDTA and shipped on wet ice	Frozen cells are stored in CryoStor CS10 in the vapor phase of liquid nitrogen and shipped on dry ice	
<b>Leuko Pak</b>	Collected undiluted into 1L bag shipped ambient	N/A	
<b>Cultured Cells</b>	Cells are cultured and transferred in a Corning T25	Frozen cells are stored in CryoStor CS10 in the vapor phase of liquid nitrogen and shipped on dry ice	

This information is intended to present a general idea of our standard procedures. However, there are multiple options available depending on your specific needs. Please contact us for more information or if you are interested in an option that is not listed above.

# ORDERING & DELIVERY INFORMATION

Every cell product package contains a **Certificate of Analysis**



778 Pacific Street, Placerville, CA 95667  
Phone: 530-626-7000  
FAX: 530-626-7900  
Email: [info@stemexpress.com](mailto:info@stemexpress.com)  
Web: [www.stemexpress.com](http://www.stemexpress.com)

## Certificate of Analysis

**Catalog Number: PB0804C**

**Product Name: 40 Million Cryopreserved Peripheral Blood CD14+, Single Donor**

**Lot Number: 1000604**

**Date of Cryopreservation: 3/20/13**

### Donor Information

Age	Gender	Height	Weight	Ethnicity	Smoker
21	Male	193cm	86kg	Caucasian	Non-smoker

### Infectious Disease Screening

HIV	Negative
HBV	Negative
HCV	Negative

### Analyses

Test performed	Acceptable Range	Result
Number of Cells per Vial	40.0x10 <sup>6</sup>	Pass
Viability by flow cytometer	>80%	98.8%
Purity by flow cytometer	! 90%	98.1%

Products are guaranteed free of Mycoplasma, Yeast, Bacteria, and Fungi

### Terms and Conditions

All products received from StemExpress, LLC are intended exclusively for *in vitro* use only. These products are not intended for use on human beings. Please note that any use of StemExpress, LLC products for any purpose other than intended including use for therapeutic or diagnostic purposes will result in legal ramifications. By your acceptance of these products, you acknowledge that you will treat them as potentially biologically hazardous specimens regardless of Infectious Disease Screening results and follow appropriate universal precautions. Full terms and conditions can be found at <http://www.stemexpress.com/terms-conditions/>.

# ORDERING & DELIVERY INFORMATION

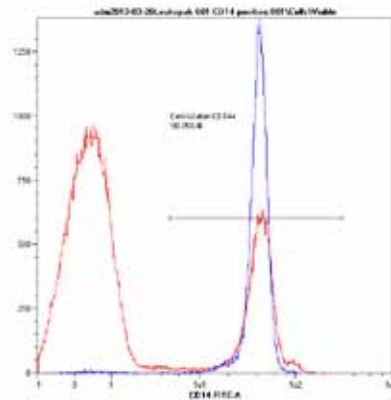
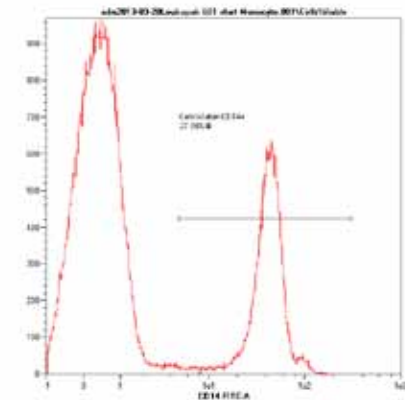
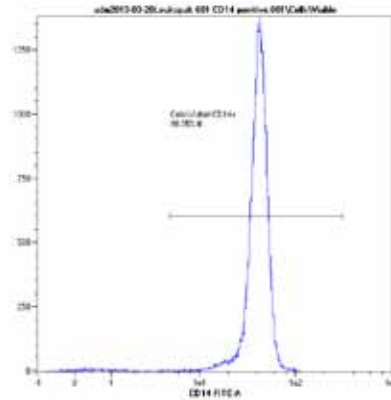
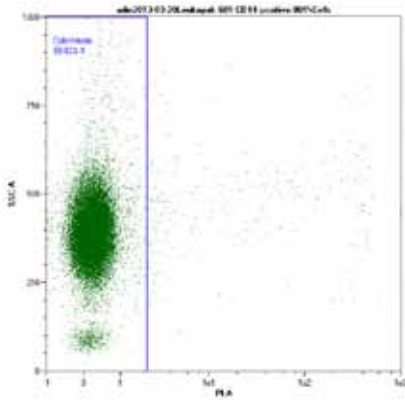
Every purified cell product package contains a **FACS Analysis Report**  
 Below is a sample FACS Analysis Report for CD14<sup>+</sup> Monocytes. The purity and viability of the cells are shown at the bottom of the graphs. Samples were collected on a Miltenyi MACSQuant.



**SHIP TO:**

Attn: Client Name  
 Address: Client Address

Email: [Client Email](#)  
 Phone: Client Phone  
 Shipping Acct: Account Owner  
 Acct #: Account Number  
 Tracking #: Tracking Number  
 Shipping Method: Shipping Method  
 Date: Date of Shipment



**PB-CD14<sup>+</sup> Viability and Purity Summary**

Item #	Description	Quantity	Lot #	Qty	Viability	Purity
PB0804C	PB-CD14 <sup>+</sup> (cryopreserved)	40x10 <sup>6</sup> cells	1000604	1 vial	98.8%	98.1%



# GENERAL PRODUCT INFORMATION

## Cell Separation

Purified primary cells are isolated by positive or negative separations using immunomagnetic MicroBead labeling systems.

Microbeads are superparamagnetic particles conjugated to highly specific antibodies or proteins. Labeling does not affect viability or function of the cells. In addition, these particles have no known effect on structure and do not interfere with subsequent experiments. MicroBeads are biodegradable and typically detach from the cells within a few days of cell culture.

**Positive Selection:** Cells of interest are directly labeled with MicroBeads and are isolated as the magnetically retained cell fraction. This is the most direct and specific method of isolating target cells from heterogeneous cell suspensions.

We guarantee that positively-selected cells have a purity of greater than or equal to 90%, unless otherwise specified.

**Negative Selection:** Negatively selected or untouched cells are isolated by labeling and depleting unwanted cells by immunomagnetic separation. The non-magnetic, unlabeled fraction contains the target cells.

Untouched cells are less likely to be activated by antibodies. We guarantee that the cell purity is greater than or equal to 85%, unless otherwise specified.

## Cell Formats

**Primary Cells:** StemExpress provides a wide range of primary hematopoietic and immunological cells, which are available from numerous sources, including peripheral blood (PB), bone marrow (BM), cord blood (CB), and fetal liver (FL). Primary hematopoietic and immunological cells have a limited life span in vitro.

StemExpress primary cells are available in fresh and frozen (cryopreserved)\* formats.

Lysate and Cell Pellet products are meant for DNA/RNA studies and are not meant for cell culture applications. Please refer to our fresh or frozen products if live cells are required.

Lysates and Cell Pellets are available by request only.

\*Please note that the viability of frozen cells after thaw is normally between the ranges of 80-98%.

THE PURITY, VIABILITY  
& QUALITY YOU NEED™

# LABORATORY SERVICES

## Human Primary Cell Isolation

Our laboratory isolates and cultures human primary cells from peripheral blood, bone marrow, umbilical cord blood, and other human tissues using a variety of techniques, including immunomagnetic separation. These cells are available in fresh suspensions or cryopreserved. We ensure the viability and purity of every sample using phenotypic characterization by flow cytometry and morphological analysis. We also provide genomic DNA, RNA and cDNA from any sample. Additionally, StemExpress can conduct contract research such as cell assays and flow cytometric analysis.

## Flow Cytometry Services

Flow cytometry is a method of cell quantification and enumeration. Utilizing the latest techniques in multisample and multiparameter analysis, we offer fast and accurate phenotypic assessment of your cell culture, including viability and purity.

- Analysis of a variety of cell types, including rare cell populations
- Fluorochrome-conjugated antibody compatible
- Volumetric cell counting
- 3 laser, 9 simultaneous color capability

### **Immunophenotyping**

- B (CD19, CD20)
- T (CD3, CD4, CD8)
- NK (CD56)
- Monocytes (CD14, CD16)
- Granulocytes (CD16, CD66b, CD123)
- Dendritic Cells (BDCA4+, CD11c, CD83)

### **Phenotyping for cell culture/ tissue transplant verification**

- MSC phenotype
- Endothelial Progenitor Cell phenotyping
- Hematopoietic Stem Cell phenotyping
- HLA typing

### **DNA quantitation and viability**

- Cell cycle analysis/DNA synthesis
- Total DNA content
- Apoptosis
- Viability

### **Intracellular signaling/protein/enzyme activity**

- Transcription factors
- Fluorogenic substrates
- Cytokines
- Total protein

\*Please contact us for custom analysis



# PRODUCTS OVERVIEW

## Human Primary Cells

### Peripheral Blood

- B Cells
- Mononuclear Cells
- Monocytes
- Natural Killer Cells
- Neutrophils
- Plasma
- Stem/Progenitor Cells
- T Cells

### Cord Blood

- Umbilical Vascular Endothelial Cells

### Fetal Liver

- Early Erythroid Progenitor Cells
- Mononuclear Cells
- Fetal Liver Stem/Progenitor Cells
- Stromal Cells
- Unprocessed Fetal Liver

### Bone Marrow

- Endothelial
- Mesenchymal Stem Cells
- Myeloid Cells
- Mononuclear Cells
- Stem/Progenitor Cells

## Blood & Tissue Collection

### Blood

- Whole Blood
- Maternal Blood
- Paternal Blood
- Umbilical Cord Blood
- Custom Isolations
- Leukapheresis

### Bone Marrow

- Whole Bone Marrow
- Plasma

### Umbilical Cord Placental Tissue

- Wharton's Jelly

### Human Adult Tissue

- Adipose
- Diseased
- Healthy
- Cadaverous
- Numerous other tissues available

### Human Fetal Tissue

- Placental
- Chorionic Villi
- Liver
- Dermal
- Umbilical Cord
- Vasculature
- Pancreas
- Numerous other tissues available

Let us customize your cell isolations!



# CUSTOM PRODUCTS

StemExpress offers a variety of customized products and services. If you would like information about an item that is not listed in our catalog, please contact us.

Phone: (530) 626-7000 • Email: [info@stemexpress.com](mailto:info@stemexpress.com) • [www.stemexpress.com](http://www.stemexpress.com)

## Examples of some custom products include but are not limited to:

**Adipose - Mesenchymal Stem Cells:** Adipose mesenchymal stem cells (AD-MSc) are isolated from lipoaspirates by collagenase digestion and subsequently cultured. AD-MSCs are cultured up to the third passage and harvested. Cultured AD-MSc cells are CD73, CD90 and CD105 positive in addition to being CD14, CD34, CD45 and HLA-DR negative.

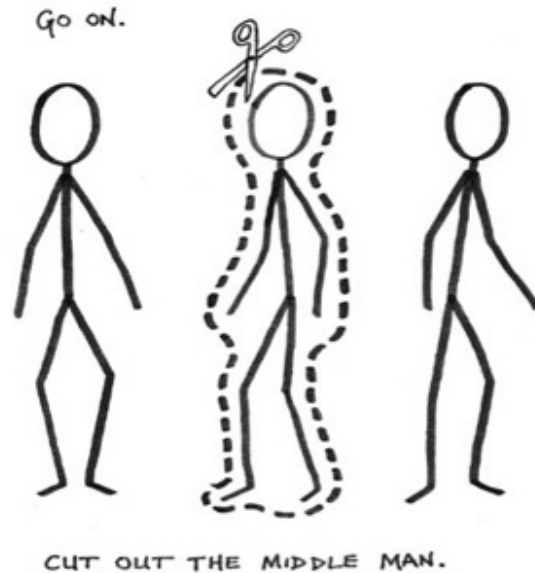
**Peripheral Blood - Mature Erythrocytes (RBCs):** Peripheral Blood Mature Erythrocytes (PB-RBC), commonly referred to as red blood cells, are isolated from normal peripheral blood by centrifugation.

**Fallopian Tube - Mesenchymal Stem Cells:** Fallopian Tube Mesenchymal Stem Cells (FT-MSc) are derived from cultured whole fallopian tube tissue samples. The tissue is processed to increase surface area and encourage cellular migration. FT-MSCs are cultured up to the third passage and harvested. Cultured FT-MSc express CD90 and CD105 in addition to being CD14, CD34 and CD45 negative.

**Whole Amniotic Fluid:** Whole fluid is collected pre-term from all types of pregnancies at varying gestations. Procurement involves complete anonymity for the patients who are donating. We utilize random generated numbers to track our individual donor specimens and there are no identifiers that can be traced back to the donors. Samples can be provided from 2cc- 5cc per donor, whole or in a client specified media.

- **Peripheral Blood - BDCA4+ Lymphoid/Plasmacytoid Dendric Cells**
- **Bone Marrow - Neutrophils**
- **Bone Marrow - CD138+ Plasma Cells**
- **Amniotic Fluid - Mesenchymal Stem Cells**
- **Dental Pulp - Mesenchymal Stem Cells**
- **Wharton's Jelly - Mesenchymal Stem Cells**
- **DNA/RNA Isolation**

# TISSUE PROCUREMENT



## **StemExpress has the largest variety of raw materials available in the industry.**

Human tissues range from human fetal, adult, cadaverous, diseased samples and bone marrow. No other biotechnology company offers the vast variety of tissue types that we procure. All tissues are collected by StemExpress trained Procurement Technicians which allows us to quality control the procurement of the sample from beginning to end.

All protocols and consents are IRB approved

### **Human Adult Tissue**

- Adipose
- Diseased
- Healthy
- Numerous other tissues available

### **Bone Marrow**

- Fresh
- Frozen
- Isolated

### **Human Fetal Tissue**

- Dermal
- Umbilical Cord
- Vasculature
- Pancreas
- Placental
- Chorionic Villi
- Liver
- Numerous other tissues available

### **Neonatal Tissue**

- Umbilical Cord
- Placenta
- Wharton's Jelly

### **Cadaverous Tissue**

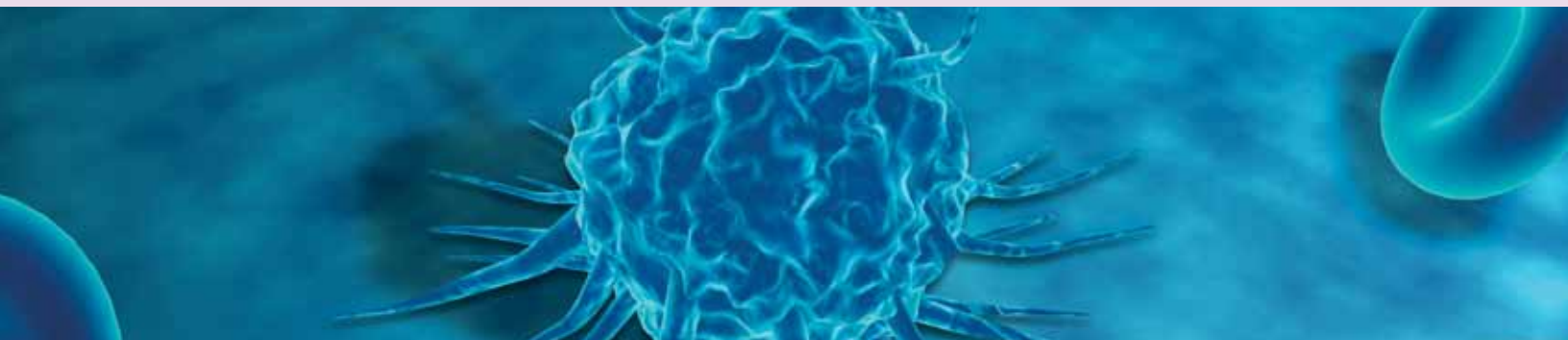
- Liver
- Muscle
- Kidney
- Numerous other tissues available

If you would like information about an item that is not listed in our catalog, please contact us.  
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# UMBILICAL CORD BLOOD

## CD3+ PAN T CELLS

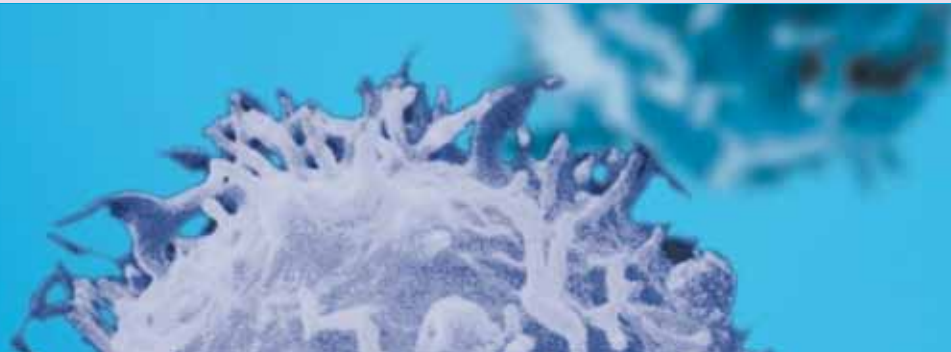


Umbilical Cord Blood CD3+ Pan T Cells (CB-CD3) are negatively selected from cord blood mononuclear cells leaving purified, untouched Pan T Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB1000F	10 million/vial	\$554
	CB1001F	20 million/vial	\$1,108
	CB1002F	25 million/vial	\$1,386
Cryopreserved	CB1000C	10 million/vial	\$476
	CB1001C	20 million/vial	\$966
	CB1002C	25 million/vial	\$1,191

# UMBILICAL CORD BLOOD

## CD4+ CD45RA+ NAÏVE HELPER T CELLS



Umbilical Cord Blood CD4+CD45RA+ Naive Helper T Cells (CB-CD4/CD45RA) are isolated in a two-step process. First, CD4+ cells are negatively selected from cord blood mononuclear cells. CD45RO+ cells are then depleted from the CD4+ pool leaving the purified, untouched CD4+CD45RA+ Naive T Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB1200F	5 million/vial	\$685
	CB1201F	10 million/vial	\$983
	CB1202F	20 million/vial	\$1,463
	CB1203F	25 million/vial	\$1,784
Cryopreserved	CB1200C	5 million/vial	\$577
	CB1201C	10 million/vial	\$853
	CB1202C	20 million/vial	\$1,361
	CB1203C	25 million/vial	\$1,660

# UMBILICAL CORD BLOOD

## CD4+ HELPER T CELLS

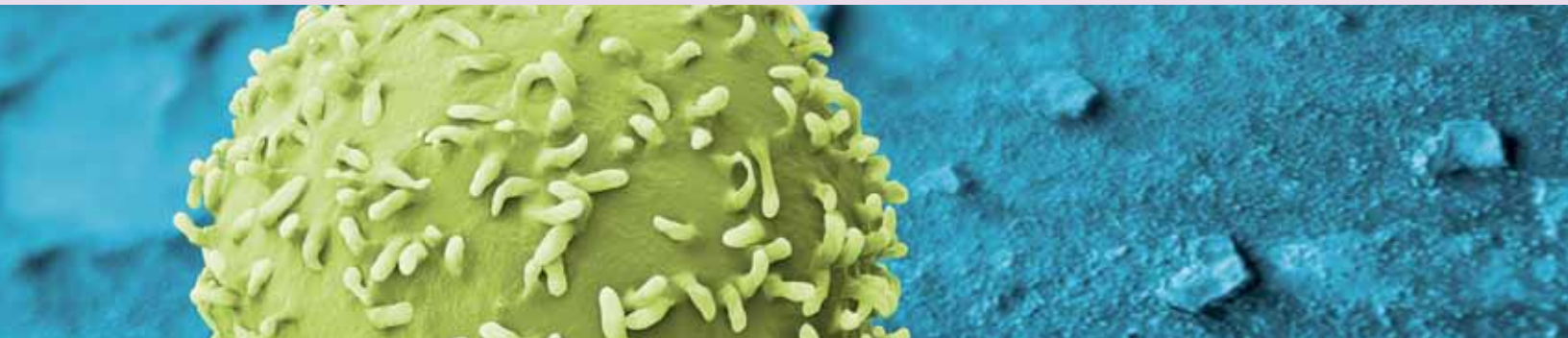


Umbilical Cord Blood CD4+ Helper T Cells (CB-CD4) are negatively selected from cord blood mononuclear cells leaving purified, untouched CD4+ Helper T Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB1100F	10 million/vial	\$554
	CB1101F	20 million/vial	\$1,108
	CB1002F	25 million/vial	\$1,386
Cryopreserved	CB1100C	10 million/vial	\$435
	CB1101C	20 million/vial	\$870
	CB1102C	25 million/vial	\$1,086

# UMBILICAL CORD BLOOD

## CD8+ CYTOTOXIC T CELLS

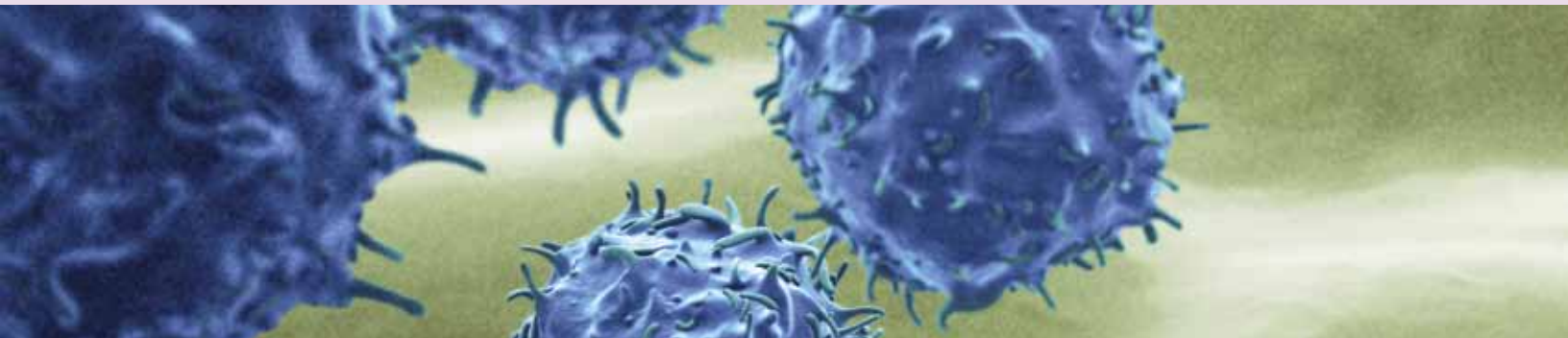


Umbilical Cord Blood CD8+ Cytotoxic T Cells (CB-CD8) are negatively selected from cord blood mononuclear cells leaving purified, untouched CD8+ Cytotoxic T Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB1300F	5 million/vial	\$807
	CB1301F	10 million/vial	\$1,605
	CB1302F	20 million/vial	\$3,227
	CB1303F	25 million/vial	\$4,038
Cryopreserved	CB1300C	5 million/vial	\$696
	CB1301C	10 million/vial	\$1,391
	CB1302C	20 million/vial	\$2,782
	CB1303C	25 million/vial	\$3,468

# UMBILICAL CORD BLOOD

## CD14+ MONOCYTES

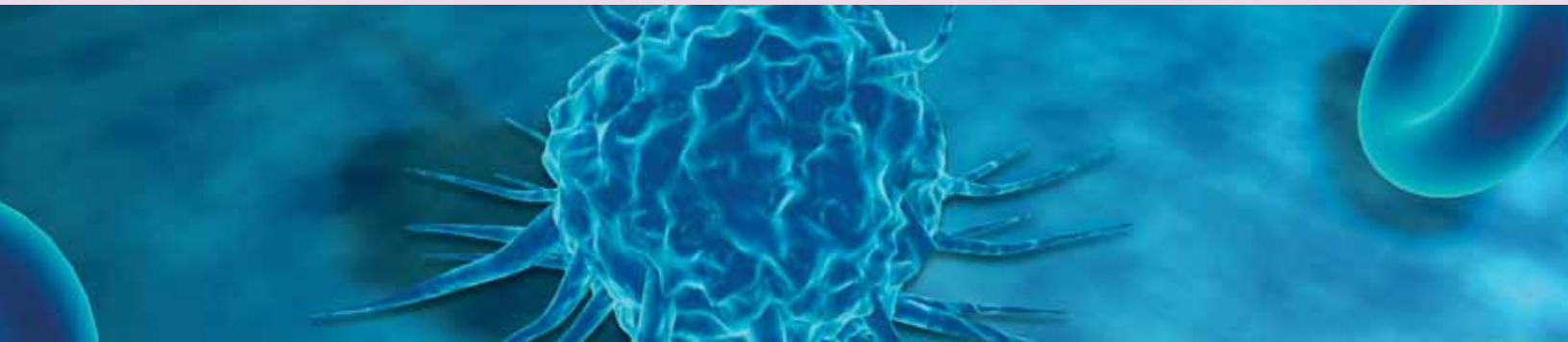


Umbilical Cord Blood CD14+ Monocytes (CB-CD14) are positively selected using immunomagnetic anti-CD14 microbeads from cord blood mononuclear cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB0800F	5 million/vial	\$741
	CB0801F	10 million/vial	\$1,482
	CB0802F	20 million/vial	\$2,964
Cryopreserved	CB0800C	5 million/vial	\$681
	CB0801C	10 million/vial	\$1,361
	CB0802C	20 million/vial	\$2,721

# UMBILICAL CORD BLOOD

## CD19+ B CELLS

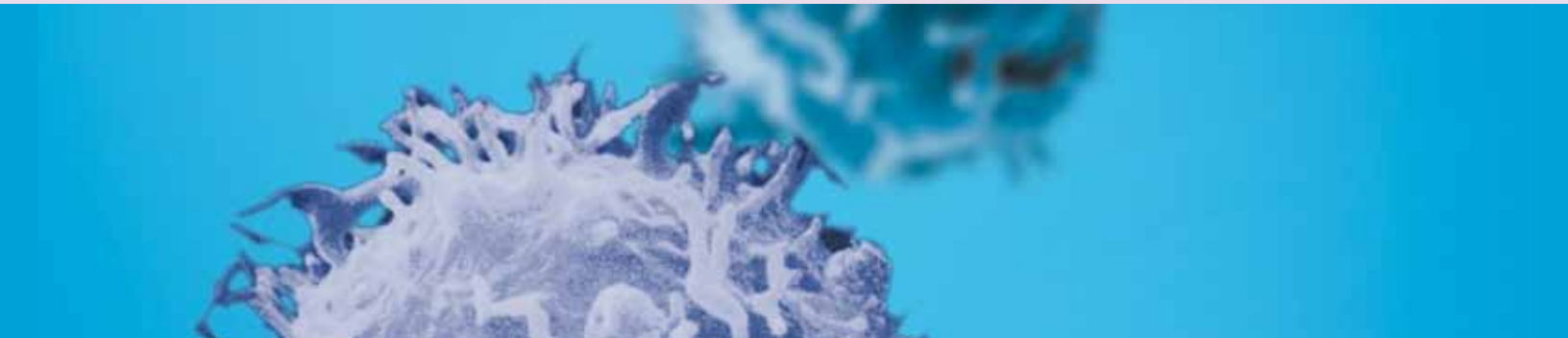


Umbilical Cord Blood CD19+ B Cells (CB-CD19) are positively selected using immunomagnetic anti-CD19 microbeads from cord blood mononuclear cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB0300F	5 million/vial	\$731
Cryopreserved	CB0300C	5 million/vial	\$696

# UMBILICAL CORD BLOOD

## CD34+ STEM/PROGENITOR CELLS

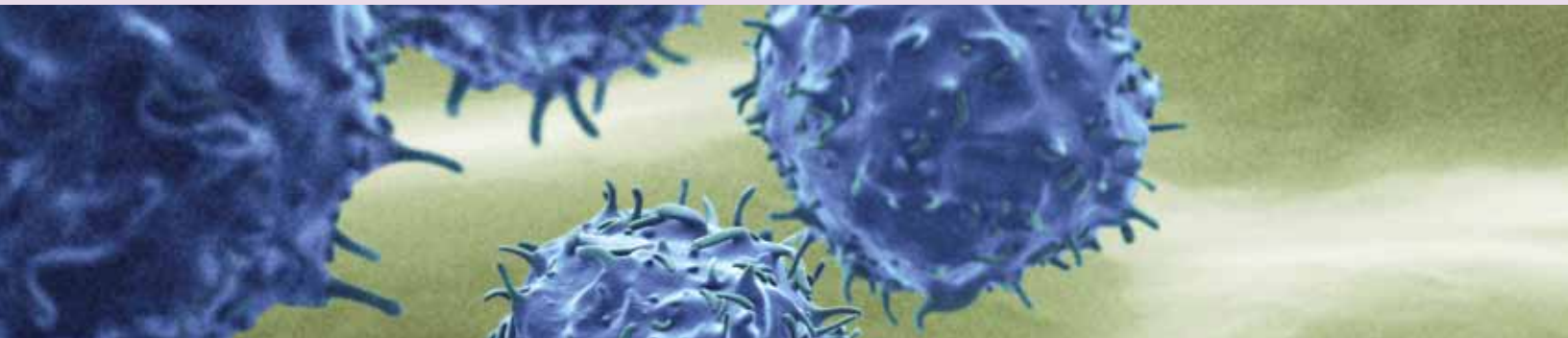


Umbilical Cord Blood CD34+ Stem/Progenitor Cells (CB-CD34) are positively selected using immunomagnetic anti-CD34 microbeads from cord blood mononuclear cells. Mixed donor isolations are a combination of two or more donors and are available in larger lots.

Format	Mixed Donor Catalog #	Single Donor Catalog #	QTY/Unit	Mixed Donor Price/Unit	Single Donor Price/Unit
Fresh	CB0100F	CB0150F	0.5 million/vial	\$523	\$583
	CB0101F	CB0151F	1 million/vial	\$1,045	\$1,166
	CB0102F	CB0152F	2 million/vial	\$2,090	\$2,332
	CB0103F	CB0153F	2.5 million/vial	\$2,613	\$2,915
Cryopreserved	CB0100C	CB0150C	0.5 million/vial	\$512	\$583
	CB0101C	CB0151C	1 million/vial	\$1,026	\$1,166
	CB0102C	CB0152C	2 million/vial	\$2,051	\$2,332
	CB0103C	CB0153C	2.5 million/vial	\$2,556	\$2,914

# UMBILICAL CORD BLOOD

## CD34 DEPLETED MONONUCLEAR CELLS



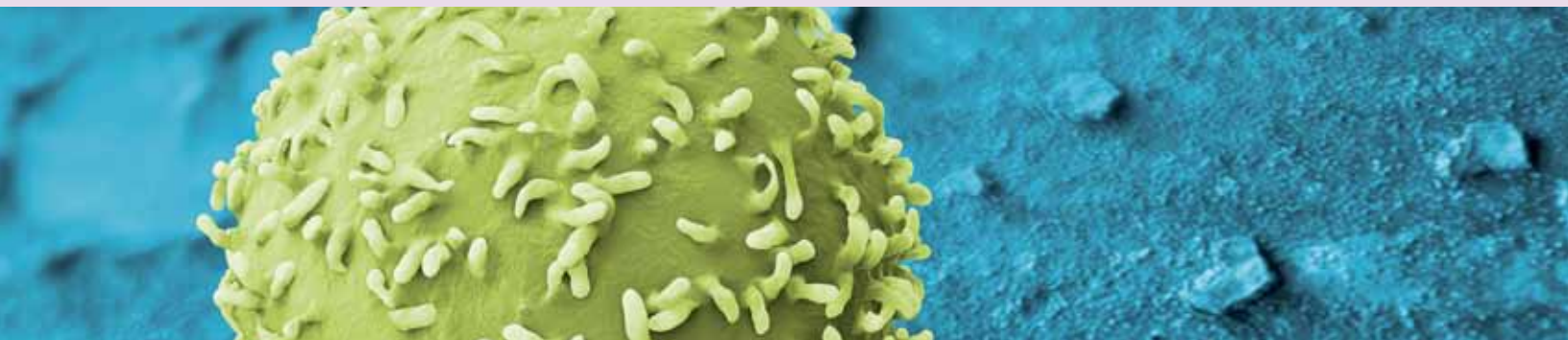
Umbilical Cord Blood CD34+ Depleted Mononuclear Cells (CB-CD34dep) are isolated by depleting the CD34+ cells from mononuclear cells using immunomagnetic anti-CD34 microbeads. CD34+ Depleted Mononuclear Cells contain less than 0.1% CD34+ cells.

Format	Mixed Donor Catalog #	Single Donor Catalog #	QTY/Unit	Mixed Donor Price/Unit	Single Donor Price/Unit
Fresh	CB0200F	CB0250F	200 million/vial	\$552	\$614
	CB0201F	CB0251F	300 million/vial	\$829	\$921
Cryopreserved	CB0200C	CB0250C	200 million/vial	\$524	\$583
	CB0201C	CB0251C	300 million/vial	\$787	\$874



# UMBILICAL CORD BLOOD

## CD36+ ERYTHROID PROGENITOR CELLS



Umbilical Cord Blood CD36+ Erythroid Progenitor Cells (CB-CD36) are derived from cultured cord blood CD34+ cells. First, CD34+ cells are positively selected using immunomagnetic anti-CD34 microbeads from cord blood mononuclear cells. The isolated CB-CD34+ cells are cultured in StemSpan™ SFEM, a serum-free expansion media for hematopoietic cells, supplemented with SCF, EPO and IL-3. Cultured cells are harvested after 10 days and CB-CD36+ cells are positively selected using immunomagnetic anti-CD36 microbeads.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB0400F	1 million/vial	\$763
	CB0401F	2 million/vial	\$1,527
	CB0402F	2.5 million/vial	\$1,908
Cryopreserved	CB0400C	1 million/vial	\$611
	CB0401C	2 million/vial	\$1,222
	CB0402C	2.5 million/vial	\$1,527

# UMBILICAL CORD BLOOD

## CD56+ NATURAL KILLER CELLS

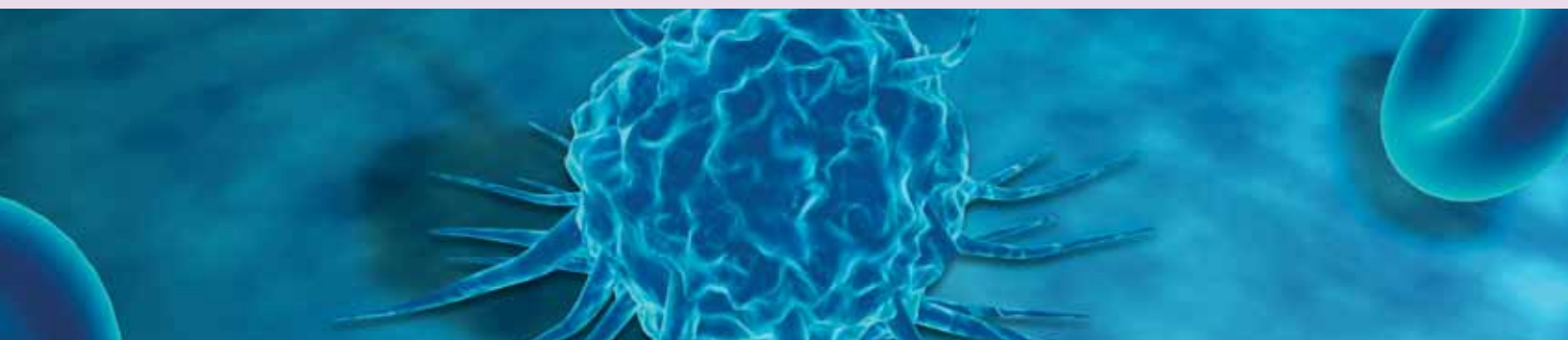


Umbilical Cord Blood CD56+ Natural Killer Cells (CB-CD56) are positively selected using immunomagnetic anti-CD56 microbeads from cord blood mononuclear cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB1400F	1 million/vial	\$732
	CB1401F	2 million/vial	\$1,463
	CB1402F	2.5 million/vial	\$1,829
Cryopreserved	CB1400C	1 million/vial	\$661
	CB1401C	2 million/vial	\$1,321
	CB1402C	2.5 million/vial	\$1,651

# UMBILICAL CORD BLOOD

## CD133+ STEM/PROGENITOR CELLS

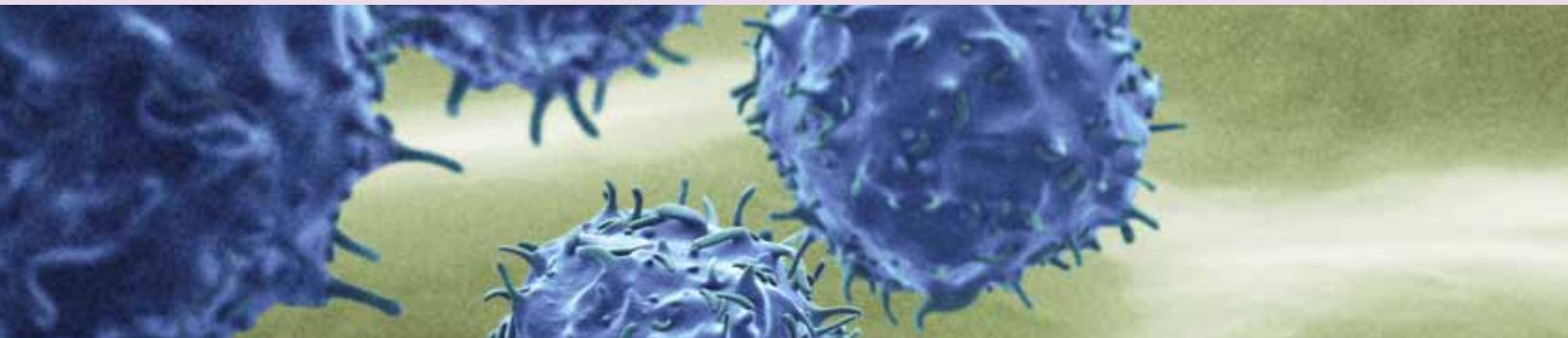


Umbilical Cord Blood CD133+ Stem/Progenitor Cells (CB-CD133) are positively selected using immunomagnetic anti-CD133 microbeads from cord blood mononuclear cells. Mixed donor isolations are a combination of two or more donors and are available in larger lots.

Format	Mixed Donor Catalog #	Single Donor Catalog #	QTY/Unit	Mixed Donor Price/Unit	Single Donor Price/Unit
Fresh	CB0600F	CB0650F	0.5 million/vial	\$1,203	\$2,519
	CB0601F	CB0651F	1 million/vial	\$2,406	\$5,037
	CB0602F	CB0652F	2 million/vial	\$4,811	\$10,074
	CB0603F	CB0653F	2.5 million/vial	\$6,014	\$12,593
Cryopreserved	CB0600C	CB0650C	0.5 million/vial	\$931	\$2,519
	CB0601C	CB0651C	1 million/vial	\$1,862	\$5,037
	CB0602C	CB0652C	2 million/vial	\$3,724	\$10,074
	CB0603C	CB0653C	2.5 million/vial	\$4,655	\$12,593

# UMBILICAL CORD BLOOD

## CD133 DEPLETED MONONUCLEAR CELLS

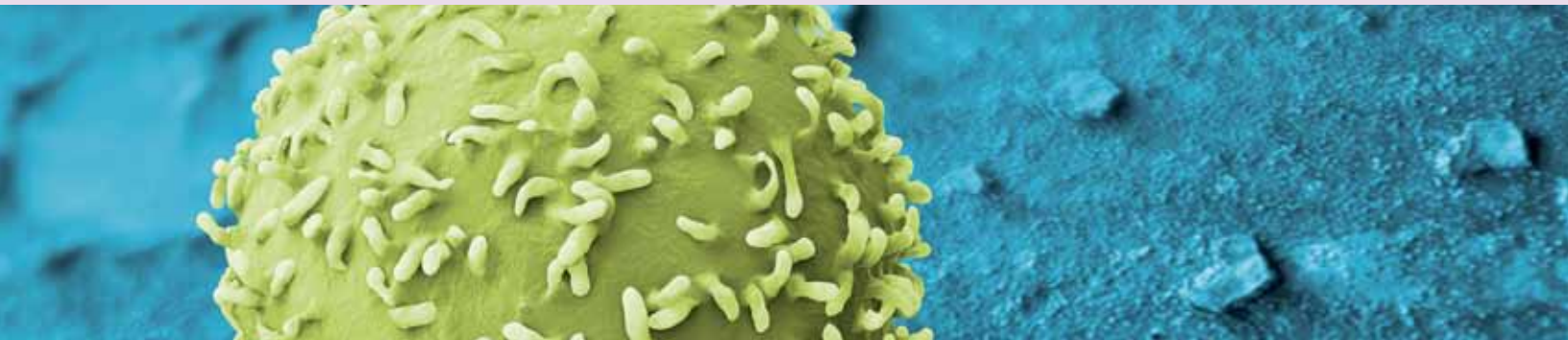


Umbilical Cord Blood CD133+ Depleted Mononuclear Cells (CB-CD133dep) are isolated by depleting the CD133+ cells from mononuclear cells using immunomagnetic anti-CD133 microbeads. CD133+ Depleted Mononuclear Cells contain less than 0.1% CD133+ cells. Mixed donor isolations are a combination of two or more donors and are available in larger lots.

Format	Mixed Donor Catalog #	Single Donor Catalog #	QTY/Unit	Mixed Donor Price/Unit	Single Donor Price/Unit
Fresh	CB0700F	CB0750F	150 million/vial	\$527	\$579
	CB0701F	CB0751F	200 million/vial	\$702	\$773
	CB0702F	CB0752F	300 million/vial	\$1,055	\$1,160
Cryopreserved	CB0700C	CB0750C	150 million/vial	\$502	\$552
	CB0701C	CB0751C	200 million/vial	\$669	\$735
	CB0702C	CB0752C	300 million/vial	\$1,004	\$1,105

# UMBILICAL CORD BLOOD

## VENOUS ENDOTHELIAL CELLS (HUVEC)

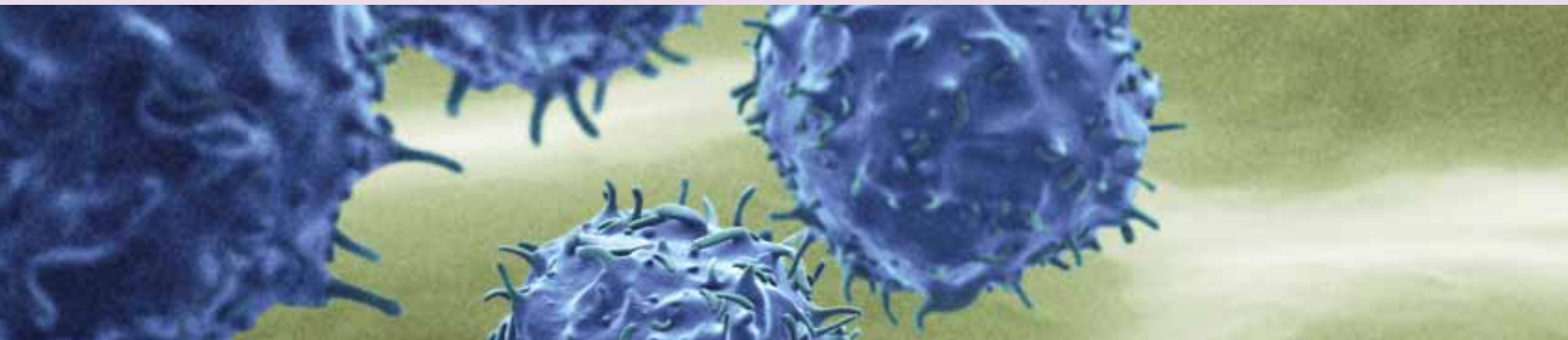


Umbilical Cord Blood Venous Endothelial Cells (HUVECs) are isolated by collagenase digestion of single umbilical cord veins. Isolated cells are cultured and harvested in their second passage, although other passages are available upon request. Mixed donor isolations are a combination of two or more donors and are available in larger lots. Isolated HUVEC cultures are positive for CD31, CD54, CD62e, von Willebrand factor and Dil-Ac-LDL uptake.

Format	Mixed Donor Catalog #	Single Donor Catalog #	QTY/Unit	Mixed Donor Price/Unit	Single Donor Price/Unit
Fresh	CB0500F	CB0550F	2 million/vial	\$870	\$1,212
	CB0501F	CB0551F	2.5 million/vial	\$1,088	\$1,515
Cryopreserved	CB0500C	CB0500C	2 million/vial	\$696	\$969
	CB0501C	CB0551C	2.5 million/vial	\$870	\$1,212

# UMBILICAL CORD BLOOD

## MONONUCLEAR CELLS

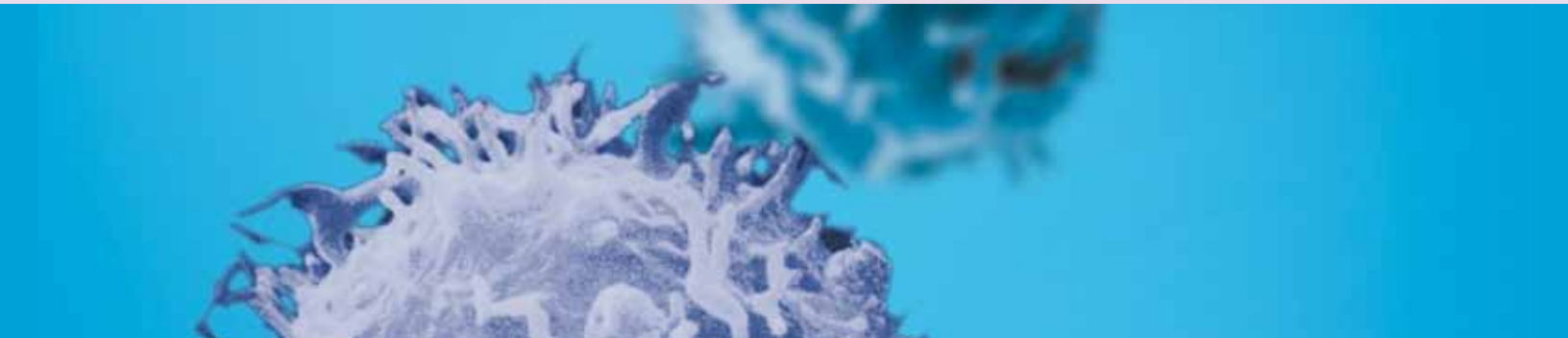


Umbilical Cord Blood Mononuclear Cells (CB-MNC) are isolated from whole blood using density gradient centrifugation.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB0001F	150 million/vial	\$646
	CB0002F	200 million/vial	\$861
	CB0003F	300 million/vial	\$1,292
Cryopreserved	CB0001C	150 million/vial	\$613
	CB0002C	200 million/vial	\$817
	CB0003C	300 million/vial	\$1,227

# UMBILICAL CORD BLOOD

## NEUTROPHILS

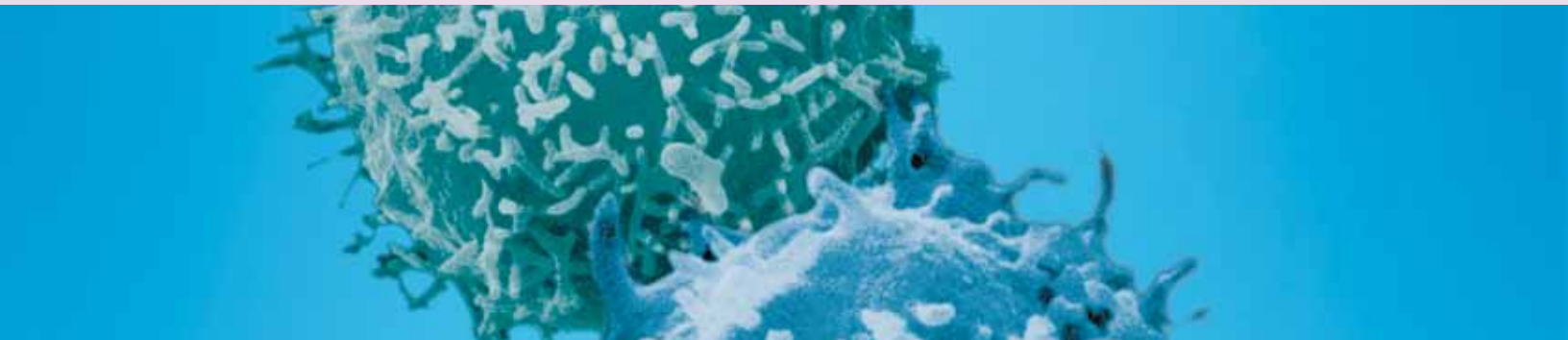


Umbilical Cord Blood Neutrophils (CB-Neutrophils) are isolated from whole cord blood in a multistep process. First, whole cord blood is treated with HetaSep to deplete red blood cells. Granulocytes are further enriched via density gradient centrifugation and processed to remove remaining red blood cells. Finally, neutrophils are negatively selected from enriched cord blood granulocytes leaving purified, untouched cord blood neutrophils.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB1500F	40 million/vial	\$760
	CB1501F	50 million/vial	\$950
Cryopreserved	CB1500C	40 million/vial	\$570
	CB1501C	50 million/vial	\$690

# UMBILICAL CORD BLOOD

## PLASMA



Umbilical Cord Blood Plasma (CB-Plasma) is isolated from whole umbilical cord blood by centrifugation. As a result, there is a reduced platelet count in the harvested plasma. Cryopreserved plasma is snap frozen in a -20°C freezer then moved to a -80°C freezer for long term storage.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	CB0900F	10 mL	\$98
	CB0901F	20 mL	\$138
	CB0902F	30 mL	\$171
	CB0903F	40 mL	\$204
	CB0904F	50 mL	\$228
Cryopreserved	CB0900C	10 mL	\$76
	CB0901C	20 mL	\$116
	CB0902C	30 mL	\$149
	CB0903C	40 mL	\$195
	CB0904C	50 mL	\$204



# PERIPHERAL BLOOD

## CD3+ PAN T CELLS

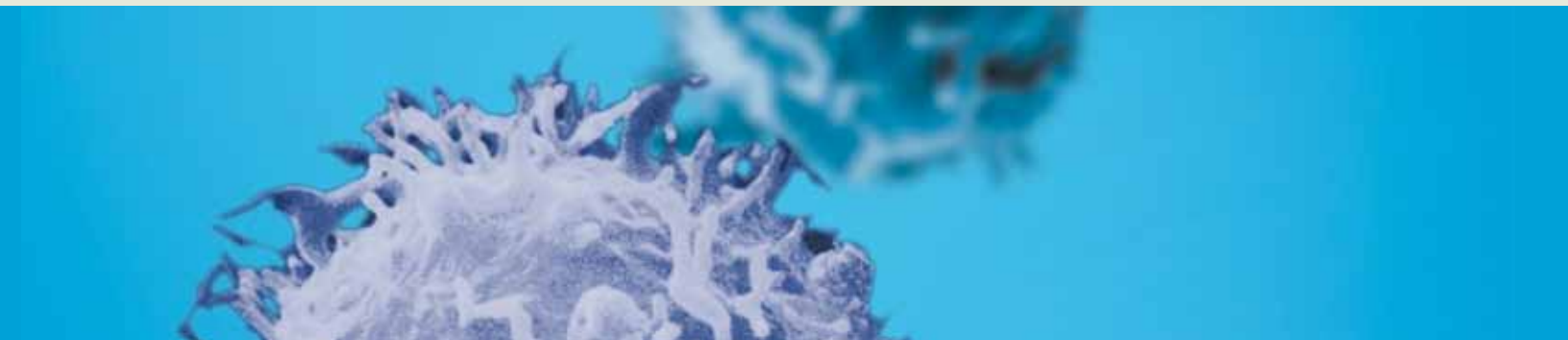


Peripheral Blood CD3+ Pan T Cells (PB-CD3) are negatively selected from peripheral blood mononuclear cells leaving purified, untouched Pan T Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB1000F	20 million/vial	\$741
	PB1001F	30 million/vial	\$1,110
Cryopreserved	PB1000C	20 million/vial	\$636
	PB1001C	30 million/vial	\$953

# PERIPHERAL BLOOD

## CD4+ CD45RA+ NAÏVE HELPER T CELLS

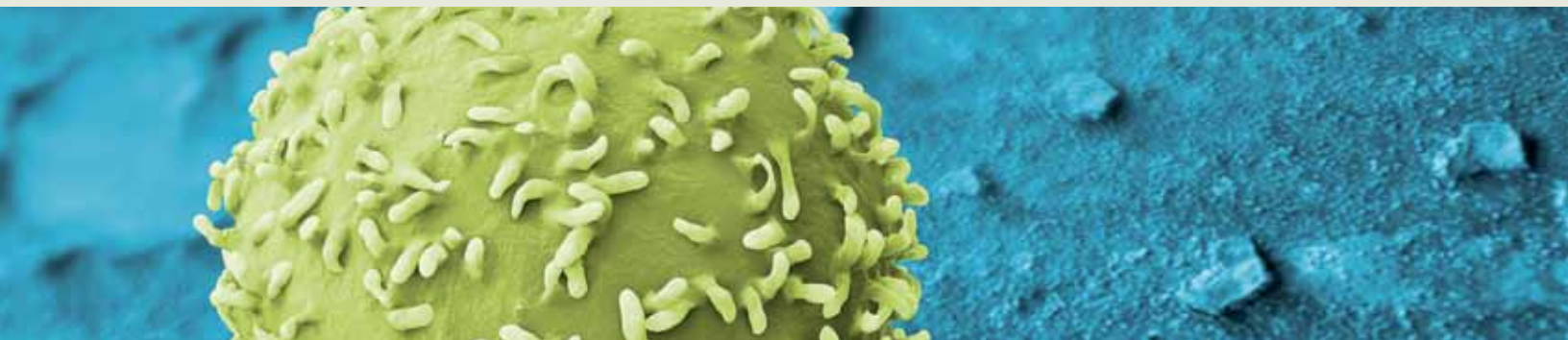


Peripheral Blood CD4+CD45RA+ Naïve Helper T Cells (PB-CD4/CD45RA) are isolated in a two-step process. First, CD4+ cells are negatively selected from peripheral blood mononuclear cells. CD45RO+ cells are then depleted from the CD4+ pool leaving the purified, untouched CD4+ CD45RA+ Naïve T Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB1200F	5 million/vial	\$932
Cryopreserved	PB1200C	5 million/vial	\$817

# PERIPHERAL BLOOD

## CD4+ CD45RO+ MEMORY T CELLS



Peripheral Blood CD4+ CD45RO+ Memory T Cells (PB-CD4/CD45RO) are isolated in a two-step process. First, Helper T cells are negatively selected from peripheral blood mononuclear cells. CD45RA+ cells are then depleted from the untouched CD4+ Helper T Cell population leaving the purified, untouched CD4+ CD45RO+ Memory T Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB2500F	5 million/vial	\$932
Cryopreserved	PB2500C	5 million/vial	\$874

# PERIPHERAL BLOOD

## CD4+ HELPER T CELLS

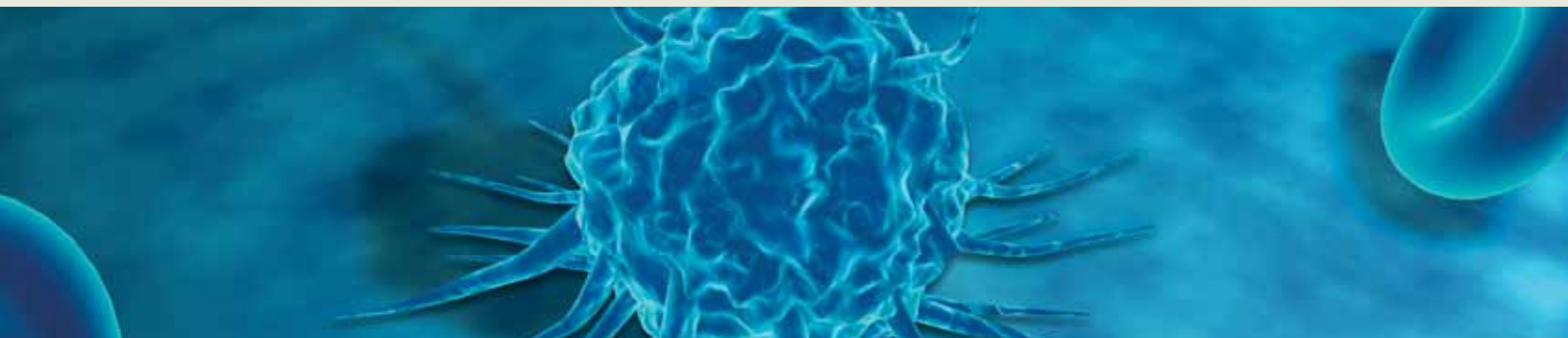


Peripheral Blood CD4+ Helper T Cells (PB-CD4) are negatively selected from peripheral blood mononuclear cells leaving purified, untouched CD4+ Helper T Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB1100F	10 million/vial	\$494
	PB1101F	15 million/vial	\$741
Cryopreserved	PB1100C	10 million/vial	\$425
	PB1101C	15 million/vial	\$638

# PERIPHERAL BLOOD

## CD4+ CD25+ REGULATORY T CELLS

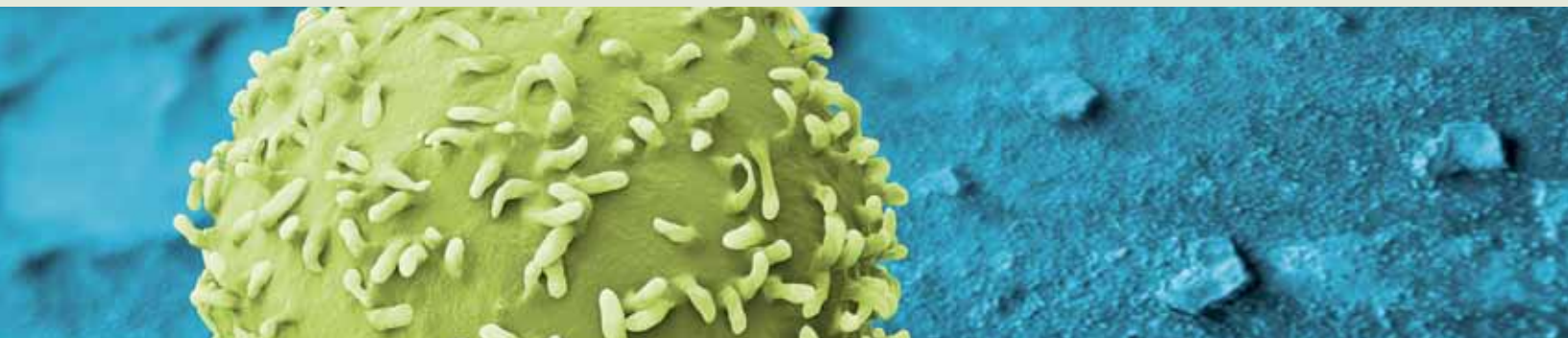


Peripheral Blood CD4+ CD25+ Regulatory T Cells (PB-CD4/CD25) are isolated in a two-step process. First, CD4+ cells are negatively selected from peripheral blood mononuclear cells. Then CD25+ cells are positively selected using immunomagnetic anti-CD25 microbeads from the untouched CD4+ Helper T population.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB2400F	2 million /vial	\$889
Cryopreserved	PB2400C	2 million /vial	\$778

# PERIPHERAL BLOOD

## CD8+ CYTOTOXIC T CELLS



Peripheral Blood CD8+ Cytotoxic T Cells (PB-CD8) are negatively selected from peripheral blood mononuclear cells leaving purified, untouched CD8+ Cytotoxic T Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB1300F	10 million/vial	\$741
Cryopreserved	PB1300C	10 million/vial	\$638

# PERIPHERAL BLOOD

## CD8+ CD45RA+ NAÏVE CYTOTOXIC T CELLS

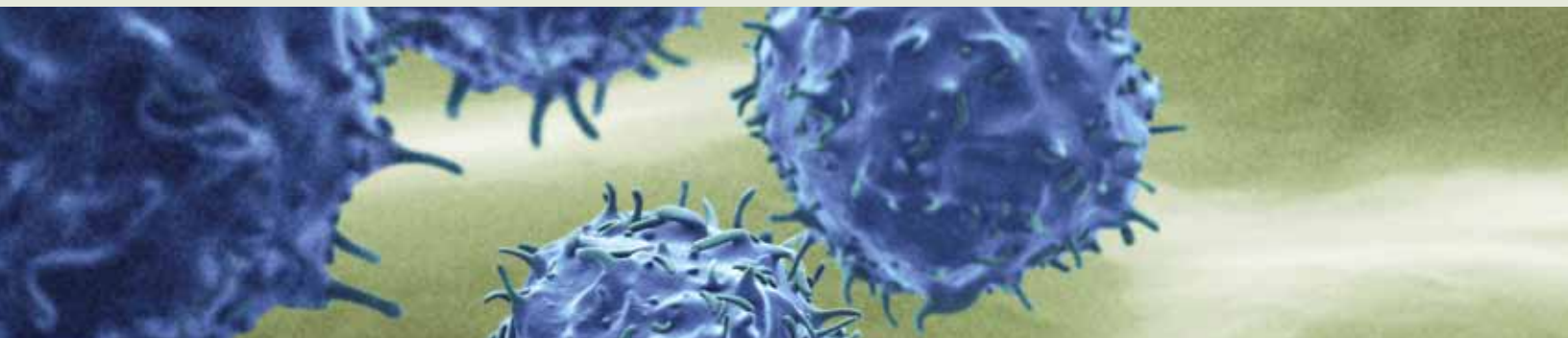


Peripheral Blood CD8+CD45RA+ Naïve Cytotoxic T Cells (PB-CD8/CD45RA) are isolated in a two-step process. First, Cytotoxic T cells are negatively selected from peripheral blood mononuclear cells. CD45RO+ cells are then depleted from the untouched CD8+ Cytotoxic T Cell population leaving the purified, untouched CD8+ CD45RA+ Naïve Cytotoxic T Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB2600F	5 million /vial	\$915
Cryopreserved	PB2600C	5 million /vial	\$800

# PERIPHERAL BLOOD

## CD14+ MONOCYTES



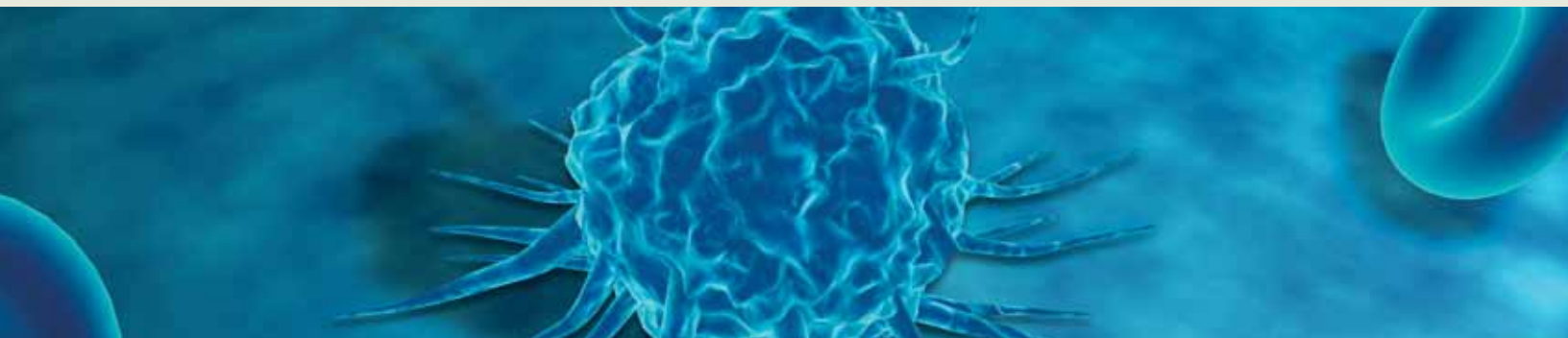
Peripheral Blood CD14+ Monocytes (PB-CD14) are negatively selected from peripheral blood mononuclear cells leaving purified, untouched CD14+ Monocytes. Positively selected monocytes are available as a custom order.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB0800F	10 million/vial	\$882
	PB0801F	20 million/vial	\$1,764
	PB0802F	40 million/vial	\$3,527
Cryopreserved	PB0800C	10 million/vial	\$760
	PB0801C	20 million/vial	\$1,519
	PB0802C	40 million/vial	\$3,037



# PERIPHERAL BLOOD

## CD19+ B CELLS

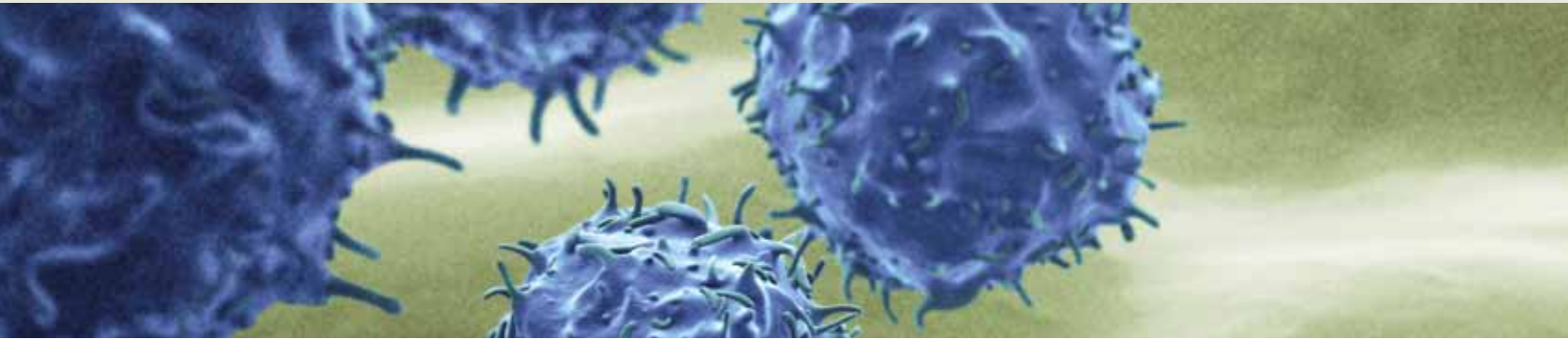


Peripheral Blood CD19+ B Cells (PB-CD19) are negatively selected from peripheral blood mononuclear cells leaving purified, untouched CD19+ B Cells. Positively selected B cells are available as a custom order.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB0300F	10 million/vial	\$915
Cryopreserved	PB0300C	10 million/vial	\$760

# PERIPHERAL BLOOD

## CD19+ CD27+ MEMORY B CELLS

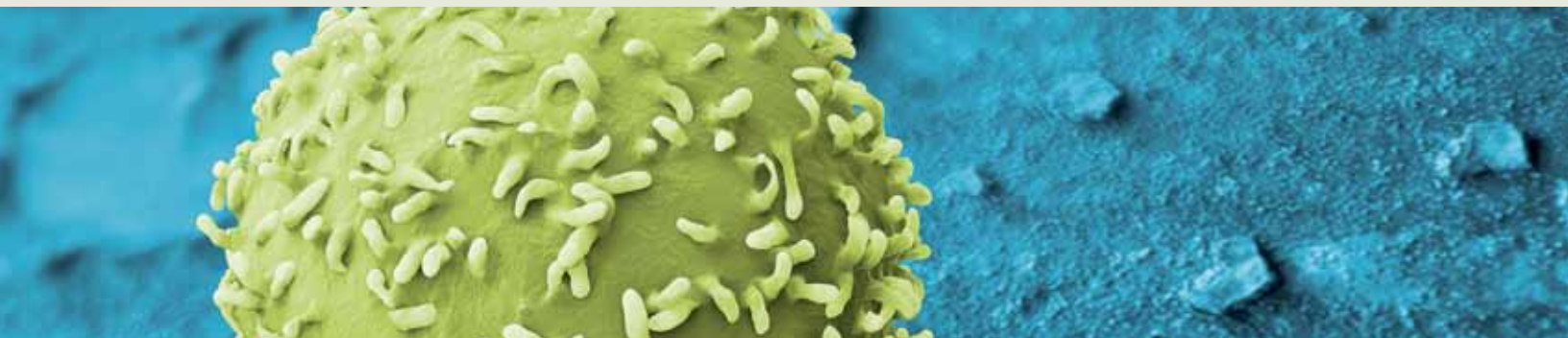


Peripheral Blood CD19+ CD27+ Memory B Cells (PB-CD19/CD27) are isolated in a two-step process. First, B cells are negatively selected from peripheral blood mononuclear cells. Then CD27+ cells are positively selected using immunomagnetic anti-CD27 microbeads from the untouched CD19+ B Cell population, leaving highly purified CD19+ CD27+ Memory B Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB1700F	0.5 million/vial	\$932
	PB1701F	1 million/vial	\$1,864
	PB1702F	2 million/vial	\$3,728
	PB1703F	5 million /vial	\$9,320
Cryopreserved	PB1700C	0.5 million/vial	\$816
	PB1701C	1 million/vial	\$1,631
	PB1702C	2 million/vial	\$3,261
	PB1703C	5 million /vial	\$8,151

# PERIPHERAL BLOOD

## CD19+ IgD+ NAÏVE B CELLS



Peripheral Blood CD19+IgD+ Naïve B Cells (PB-CD19/IgD) are isolated in a single-step process that depletes non-B Cells while depleting CD27+ Memory B Cells leaving the purified, untouched CD19+ IgD+ Naïve B Cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB1600F	0.5 million/vial	\$551
	PB1601F	1 million/vial	\$1,100
	PB1602F	2 million/vial	\$2,199
	PB1603F	5 million /vial	\$5,496
Cryopreserved	PB1600C	0.5 million/vial	\$535
	PB1601C	1 million/vial	\$1,071
	PB1602C	2 million/vial	\$2,142
	PB1603C	5 million /vial	\$5,354

# PERIPHERAL BLOOD

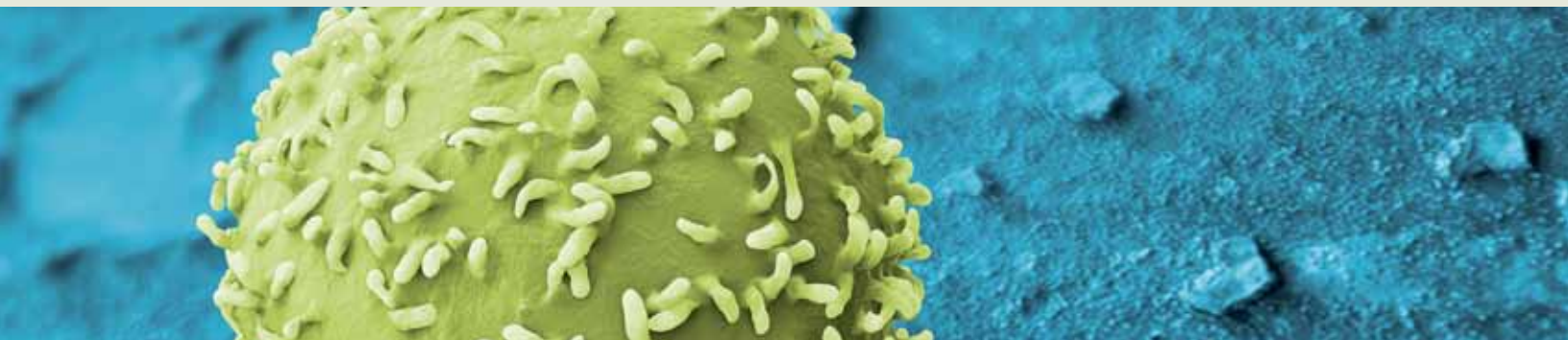
## CD34+ STEM/PROGENITOR CELLS

Peripheral Blood CD34+ Stem/Progenitor Cells (PB-CD34) are positively selected using immunomagnetic anti-CD34 microbeads from peripheral blood mononuclear cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB0100F	0.2 million/vial	\$813
	PB0101F	0.5 million/vial	\$1,895
	PB0102F	1 million/vial	\$3,311
Cryopreserved	PB0100C	0.2 million/vial	\$765
	PB0101C	0.5 million/vial	\$1,832
	PB0102C	1 million/vial	\$2,949

# PERIPHERAL BLOOD

## CD36+ ERYTHROID PROGENITOR CELLS



Peripheral Blood CD36+ Erythroid Progenitor Cells (PB-CD36) are derived from peripheral blood CD34+ cells. First, CD34+ cells are positively selected using immunomagnetic anti-CD34 microbeads from peripheral blood mononuclear cells. The isolated PB-CD34+ cells are cultured in StemSpan™ SFEM, a serum-free expansion media for hematopoietic cells, supplemented with SCF, EPO and IL-3. Cultured cells are harvested after 10 days and PB-CD36+ cells are positively selected using immunomagnetic anti-CD36 microbeads.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB0400F	1 million/vial	\$720
	PB0401F	2.5 million/vial	\$1,800
Cryopreserved	PB0400C	1 million/vial	\$660
	PB0401C	2.5 million/vial	\$1,575

# PERIPHERAL BLOOD

## CD56+ NATURAL KILLER CELLS

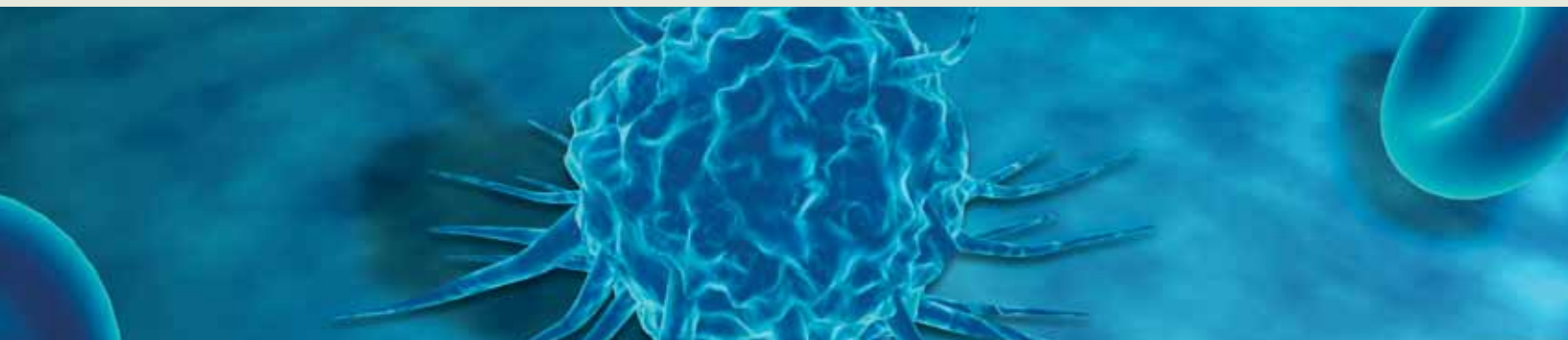


Peripheral Blood CD56+ Natural Killer Cells (PB-CD56) are negatively selected from peripheral blood mononuclear cells leaving purified, untouched CD56+ Natural Killer Cells. Positively selected natural killer cells are available as a custom order.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB1400F	5 million/vial	\$882
Cryopreserved	PB1400C	5 million/vial	\$760

# PERIPHERAL BLOOD

## BASOPHILS

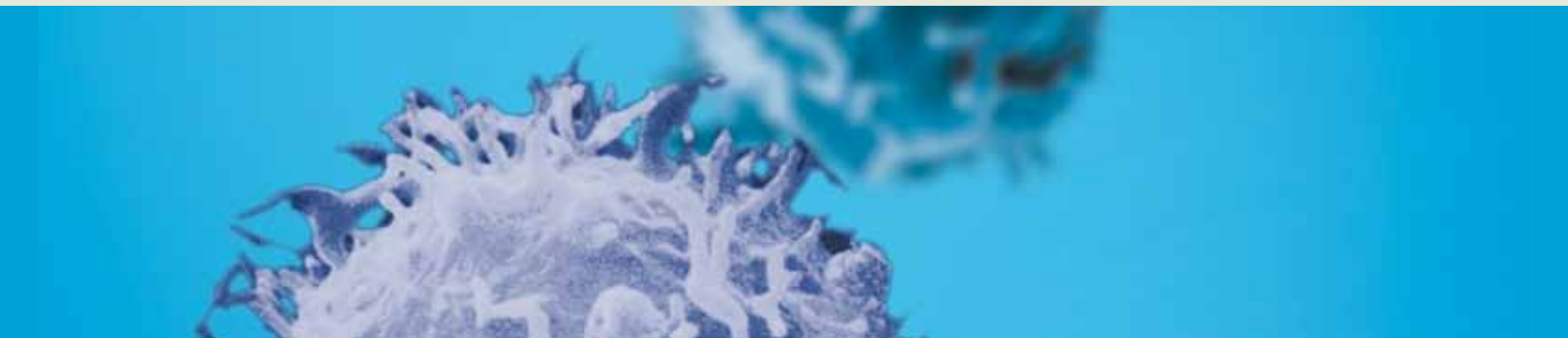


Peripheral Blood Basophils (PB-Basophils) are isolated from whole peripheral blood in a multistep process. Whole peripheral blood is treated with HetaSep to deplete red blood cells. Then, basophils are negatively selected from the enriched leukocytes leaving purified, untouched peripheral blood basophils.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB1800F	0.2 million/vial	\$609
	PB1801F	0.3 million/vial	\$915
Cryopreserved	PB1800C	0.2 million/vial	\$533
	PB1801C	0.3 million/vial	\$800

# PERIPHERAL BLOOD

## EOSINOPHILS



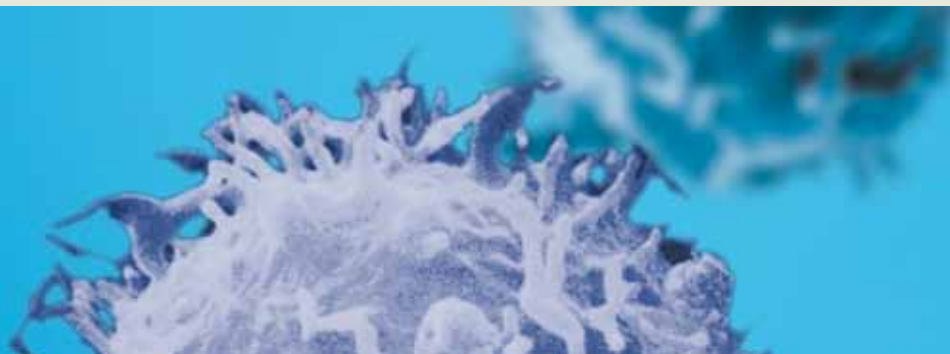
Peripheral Blood Eosinophils (PB-Eosinophils) are isolated from whole peripheral blood in a multistep process. First, whole peripheral blood is treated with HetaSep to deplete red blood cells. Granulocytes are further enriched via density gradient centrifugation and processed to remove remaining red blood cells. Finally, eosinophils are negatively selected from enriched peripheral blood granulocytes leaving purified, untouched peripheral blood eosinophils.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB2100F	1 million/vial	\$915
Cryopreserved	PB2100C	1 million/vial	\$800



# PERIPHERAL BLOOD

## NEUTROPHILS

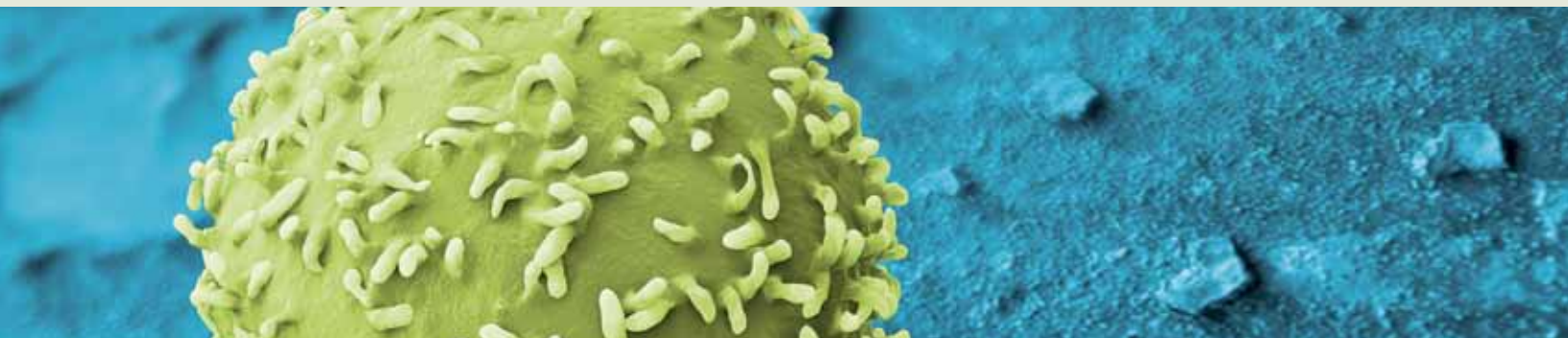


Peripheral Blood Neutrophils (PB-Neutrophils) are isolated from whole peripheral blood in a multistep process. First, whole peripheral blood is treated with HetaSep to deplete red blood cells. Granulocytes are further enriched via density gradient centrifugation and processed to remove remaining red blood cells. Finally, neutrophils are negatively selected from enriched peripheral blood granulocytes leaving purified, untouched peripheral blood neutrophils.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB1500F	40 million/vial	\$800
Cryopreserved	PB1500C	40 million/vial	\$738

# PERIPHERAL BLOOD

## MONOCYTE-DERIVED IMMATURE MYELOID DENDRITIC CELLS



Peripheral Blood Monocyte-Derived Dendritic Cells (PB-MoDC) are derived from negatively selected monocytes. The untouched monocytes are cultured for 4 - 5 days with 10% FBS in the presence of GM-CSF and IL-4. Cultured Monocyte-derived dendritic cells do not express CD14, while expressing CD11c, HLA-DR and weakly expressing CD83.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB2000F	1.5 million/vial	\$688
Cryopreserved	PB2000C	1.5 million/vial	\$539

# PERIPHERAL BLOOD

## MONOCYTE-DERIVED MACROPHAGES

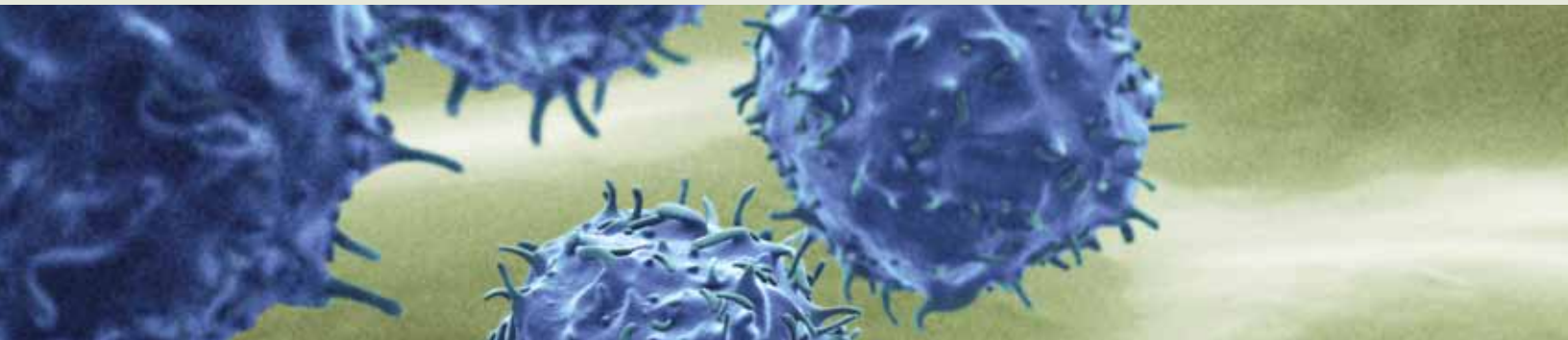


Peripheral Blood Monocyte-Derived Macrophages (PB-MoMΦ) are derived from negatively selected monocytes. The untouched monocytes are cultured for 4 - 5 days with 10% FBS in the presence of M-CSF and IL-4. Cultured Monocyte-derived macrophages express CD11b, CD18, CD68 and HLA-DR.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB2200F	1.5 million/vial	\$720
Cryopreserved	PB2200C	1.5 million/vial	\$571

# PERIPHERAL BLOOD

## MONONUCLEAR CELLS

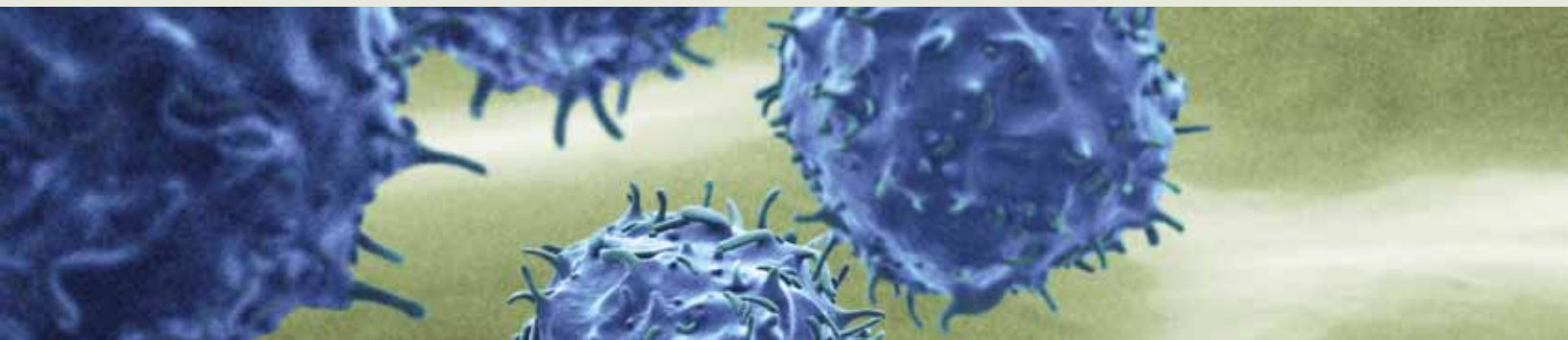


Peripheral Blood Mononuclear Cells (PB-MNC) are isolated from whole blood using density gradient centrifugation.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB0001F	300 million/vial	\$810
Cryopreserved	PB0001C	300 million/vial	\$729

# PERIPHERAL BLOOD

## LUEKO PAK



Normal peripheral blood mononuclear cells are collected from healthy donors. For the Full Leuko Pak, approximately three blood volumes are processed using the Spectra Optia® Apheresis System and between 200-300mL of plasma can be collected at the same time as the mononuclear cells.

Format	Catalog #	QTY/Unit	Price/Unit
Normal PB Leuko Pak (Full Pak)	LE1001F	1 Bag Range: 1 to 3.5x10 <sup>10</sup>	\$2,660

# PERIPHERAL BLOOD

## PLASMA

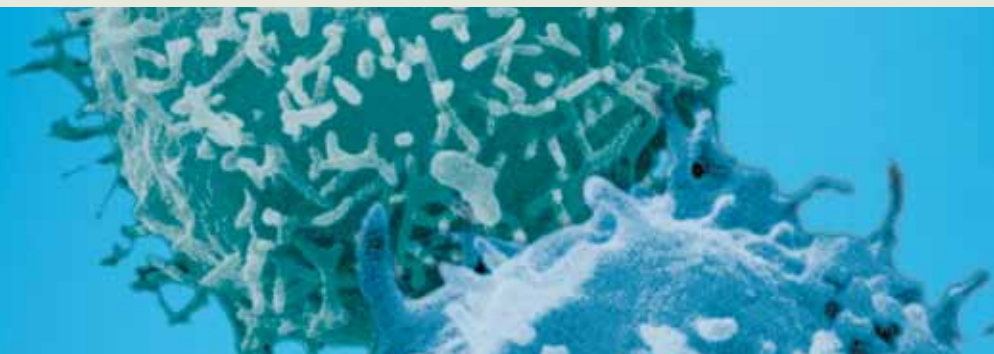


Peripheral Blood Plasma (PB-Plasma) is either fractionated from a whole blood bag by centrifugation or is collected on the Spectra Optia® Apheresis System at the same time as a mononuclear cell collection. The harvested plasma contains a reduced platelet count.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB0900F	10 mL	\$99
	PB0901F	20 mL	\$139
	PB0902F	30 mL	\$172
	PB0903F	40 mL	\$206
	PB0904F	50 mL	\$228
	PB0905F	100 mL	\$288
	PB0906F	150 mL	\$343
Cryopreserved	PB0900C	10 mL	\$77
	PB0901C	20 mL	\$117
	PB0902C	30 mL	\$151
	PB0903C	40 mL	\$184
	PB0904C	50 mL	\$206
	PB0905C	100 mL	\$266
	PB0906C	150 mL	\$322

# PERIPHERAL BLOOD

## WHOLE BLOOD

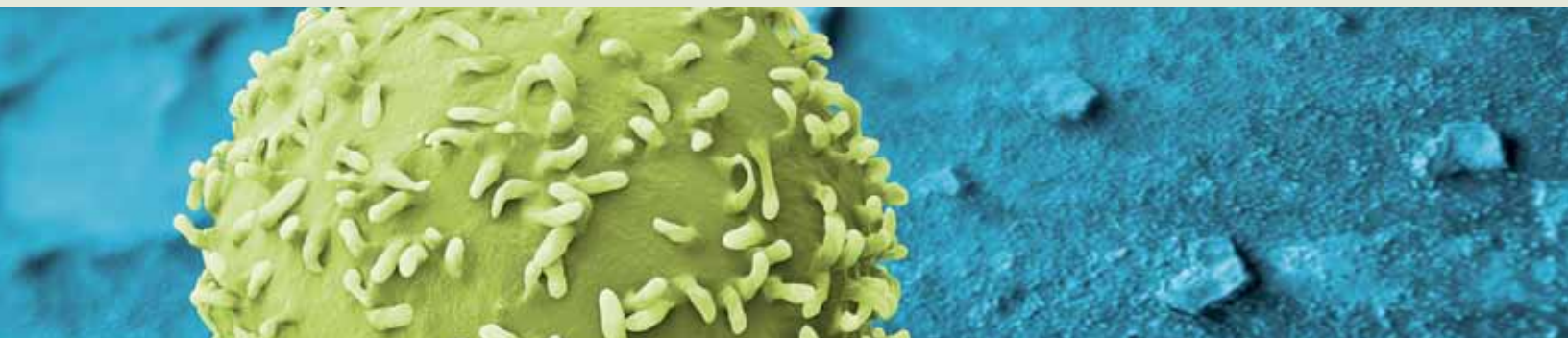


Peripheral Blood Whole (PB) is collected in sterile systems containing either ACD:A, EDTA or CP2D anticoagulants according to customer specifications. Our standard anticoagulant is CP2D, with 63mL CP2D per bag, intended for 500mL draws. Please contact us for custom orders. Whole blood may be collected in vacutainer tubes with custom anticoagulants, syringes or transfer packs to accommodate low volume draws.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	PB2700F	10 mL	\$115
	PB2701F	50 mL	\$240
	PB2702F	100 mL	\$360
	PB2703F	150 mL	\$420
	PB2704F	250 mL	\$480
	PB2705F	500 mL	\$600
Cryopreserved	PB2700C	10 mL	\$100
	PB2701C	50 mL	\$210
	PB2702C	100 mL	\$330
	PB2703C	150 mL	\$390
	PB2704C	250 mL	\$450
	PB2705C	500 mL	\$570

# PERIPHERAL BLOOD

## MATERNAL BLOOD / MATERNAL BLOOD PLASMA



**Maternal Blood** - Maternal blood samples are collected from all types of pregnancies at varying gestations and demographics. Samples can be provided from a minimum of 20cc up to a maximum of 60cc per donor. Different types of blood collection tubes are per request with the most popular being Streck, ACD-A and EDTA.

**Maternal Blood Plasma** - Maternal Blood Plasma is fractionated from a whole blood bag by centrifugation and supplied in a 50mL conical tube.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	MB2700F	10 mL	\$340
	MB2701F	20 mL	\$355
	MB2702F	30 mL	\$370
	MB2703F	40 mL	\$385
	MB2704F	50 mL	\$400
	MB2705F	60 mL	\$415

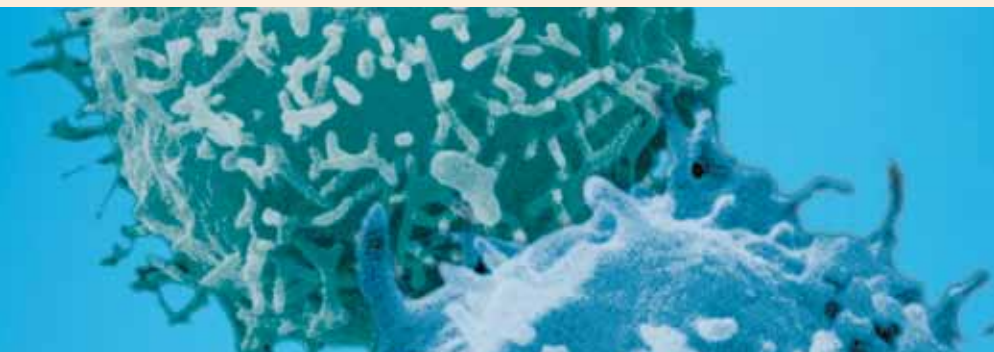
Format	Catalog #	QTY/Unit	Price/Unit
Fresh	MB0950F	10 mL	\$350
	MB0951F	20 mL	\$380
	MB0952F	30 mL	\$410
	MB0953F	40 mL	\$440
	MB0954F	50 mL	\$485
	MB0955F	60 mL	\$500
Cryopreserved	MB0950C	10 mL	\$350
	MB0951C	20 mL	\$380
	MB0952C	30 mL	\$410
	MB0953C	40 mL	\$440
	MB0954C	50 mL	\$485
	MB0955C	60 mL	\$500

Infectious Disease Screening and special non-profit or volume pricing are available upon request.



# FETAL LIVER

## CD34+ STEM/PROGENITOR CELLS

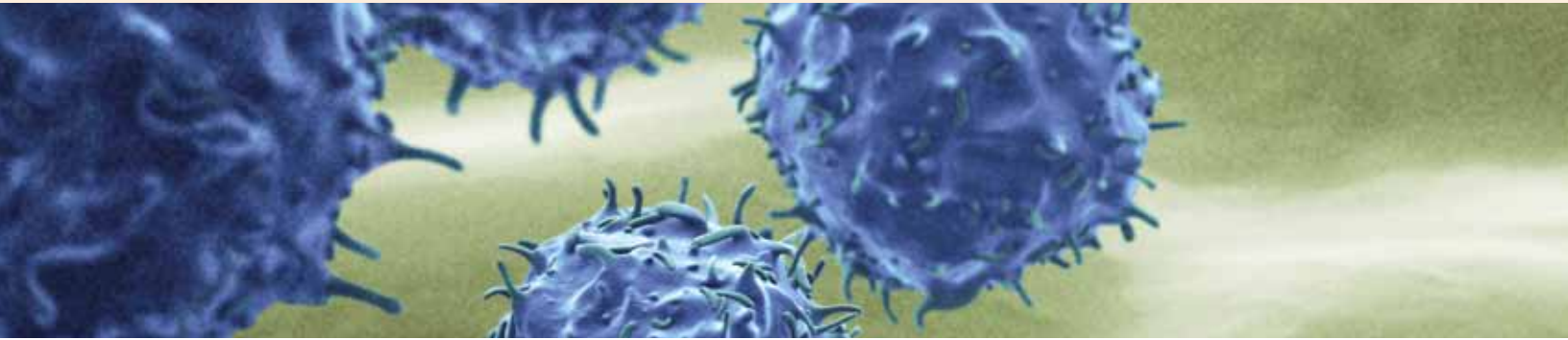


Fetal Liver CD34+ Stem/Progenitor Cells (FL-CD34) are positively selected from homogenized liver tissue. First, fetal liver tissue is enzymatically digested and further processed to generate a leukocyte-rich suspension. CD34+ cells are then positively selected from the leukocyte-rich suspension using immunomagnetic anti-CD34 microbeads, leaving highly purified fetal liver CD34+ cells.

Format	Catalog #	QTY/Unit	Price Unit
Fresh	FL0001F	0.5 million/vial	\$565
	FL0002F	1 million/vial	\$931
	FL0003F	2 million/vial	\$1,840
Cryopreserved	FL0001C	0.5 million/vial	\$539
	FL0002C	1 million/vial	\$877
	FL0003C	2 million/vial	\$1,754

# FETAL LIVER

## CD36+ ERYTHROID PROGENITOR CELLS

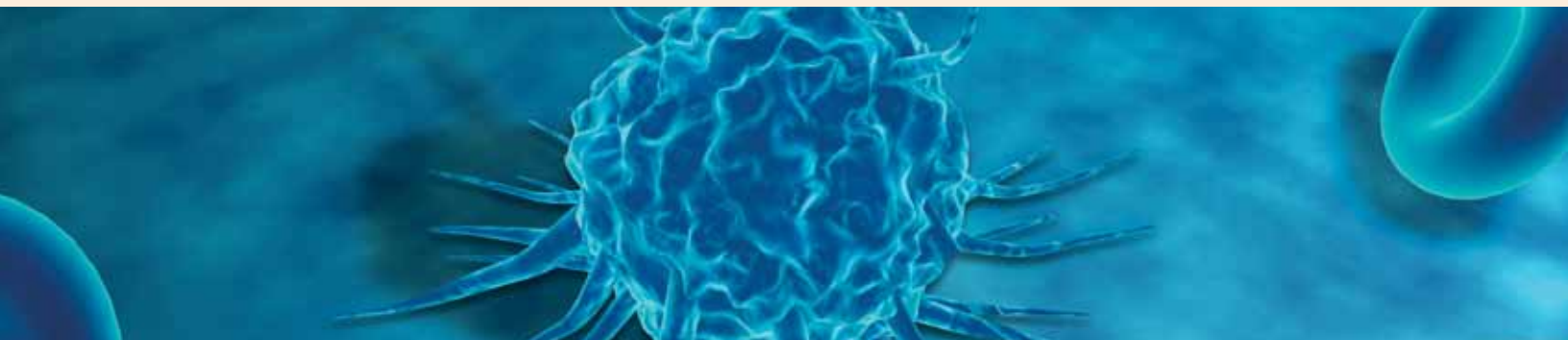


Fetal Liver CD36+ Erythroid Progenitor Cells (FL-CD36) are derived from fetal liver CD34+ cells. First, CD34+ cells are positively selected using immunomagnetic anti-CD34 microbeads from fetal liver mononuclear cells. The isolated FL-CD34+ cells are cultured in StemSpan™ SFEM, a serum-free expansion media for hematopoietic cells, supplemented with SCF, EPO and IL-3. Cultured cells are harvested after 10 days and FL-CD36+ cells are positively selected using immunomagnetic anti-CD36 microbeads.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	FL0100F	1 million/vial	\$573
	FL0101F	2 million/vial	\$1,456
Cryopreserved	FL0100C	1 million/vial	\$546
	FL0101C	2 million/vial	\$1,091

# FETAL LIVER

## CD133+ STEM/PROGENITOR CELLS



Fetal Liver CD133+ Stem/Progenitor Cells (FL-CD133) are positively selected from homogenized liver tissue. First, fetal liver tissue is enzymatically digested and further processed to generate a leukocyte-rich suspension. CD133+ cells are then positively selected from the leukocyte-rich suspension using immunomagnetic anti-CD133 microbeads, leaving highly purified fetal liver CD133+ cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	FL0300F	0.5 million/vial	\$878
	FL0301F	1 million/vial	\$1,217
	FL0302F	2 million/vial	\$2,433
Cryopreserved	FL0300C	0.5 million/vial	\$836
	FL0301C	1 million/vial	\$1,159
	FL0302C	2 million/vial	\$2,317

# FETAL LIVER

## MONONUCLEAR CELLS

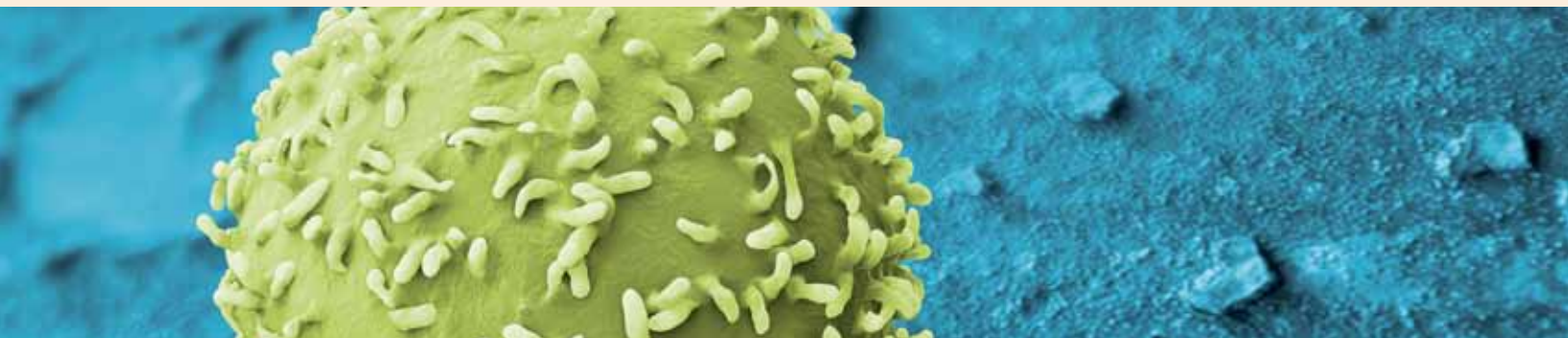


Fetal Liver – Mononuclear Cells (FL-MNCs) are isolated using our liver homogenization protocol. This population is free of red blood cells. Cryopreserved samples are stored in optimized medium for improved viability upon reanimation.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	FL0200F	5 million/vial	\$1,035
Cryopreserved	FL0200C	5 million/vial	\$986

# FETAL LIVER

## STROMAL CELLS

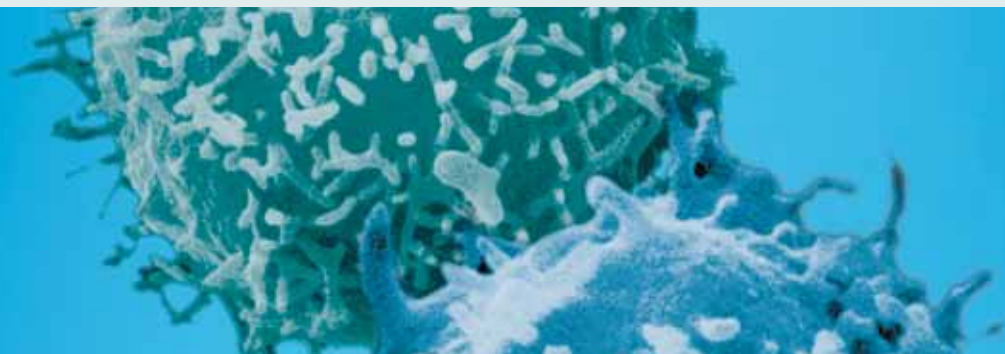


Fetal Liver Mesenchymal Stem Cells (FL-MSC) are derived from cultured fetal liver mononuclear cells. First, fetal liver tissue is enzymatically digested and further processed to generate a leukocyte-rich suspension. Mononuclear cells are enriched from the leukocyte-rich suspension by a density gradient separation and subsequently cultured. Cultured fetal liver stromal cells have a fibroblast-like phenotype and express CD90 and CD105 in addition to being CD14, CD34 and CD45 negative.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	FL0400F	1 million/vial	\$966
	FL0401F	2 million/vial	\$1,932
Cryopreserved	FL0400C	1 million/vial	\$920
	FL0401C	2 million/vial	\$1,840

# BONE MARROW

## CD33+ CD66+ MYELOID CELLS



Bone Marrow CD33+ CD66+ Myeloid Cells (BM-CD33/CD66) are positively selected using immunomagnetic anti-CD33 and anti-CD66 microbeads from bone marrow mononuclear cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	BM1900F	1 million/vial	\$801
	BM1901F	2 million/vial	\$1,602
	BM1902F	5 million/vial	\$4,005
Cryopreserved	BM1900C	1 million/vial	\$760
	BM1901C	2 million/vial	\$1,522
	BM1902C	5 million/vial	\$3,805

# BONE MARROW

## CD34+ STEM/PROGENITOR CELLS

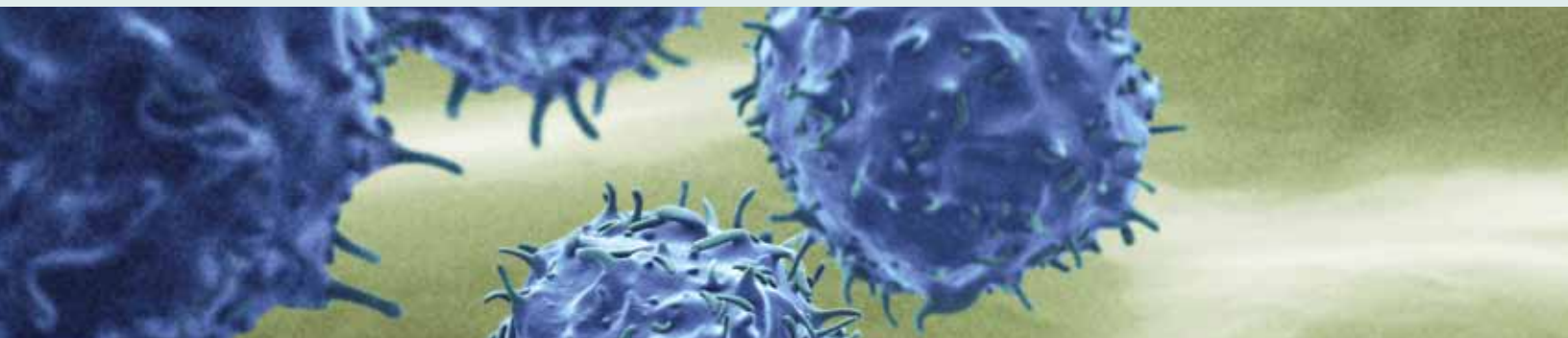


Bone Marrow CD34+ Stem/Progenitor Cells (BM-CD34) are positively selected using immunomagnetic anti-CD34 microbeads from bone marrow mononuclear cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	BM0100F	0.5 million/vial	\$533
	BM0101F	1 million/vial	\$860
	BM0102F	2.5 million /vial	\$2,149
Cryopreserved	BM0100C	0.5 million/vial	\$506
	BM0101C	1 million/vial	\$812
	BM0102C	2.5 million /vial	\$2,029

# BONE MARROW

## CD34 DEPLETED MONONUCLEAR CELLS



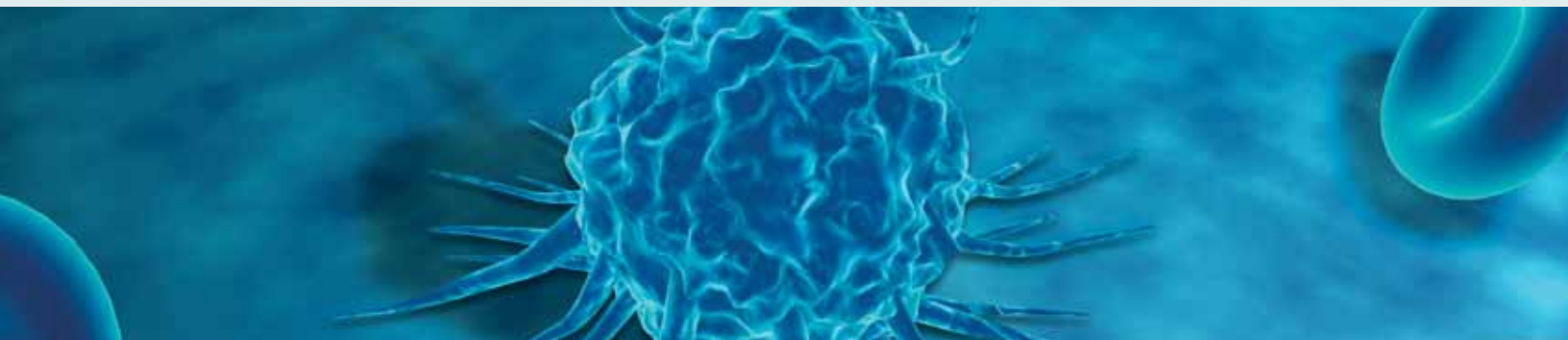
Bone Marrow CD34+ Depleted Mononuclear Cells (PB-CD34dep) are isolated by depleting the CD34+ cells from peripheral blood mononuclear cells using immunomagnetic anti-CD34 microbeads. CD34 Depleted Mononuclear Cells contain less than 0.1% CD34+ cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	BM0200F	300 million /vial	\$943
Cryopreserved	BM0200C	300 million /vial	\$898



# BONE MARROW

## CD36+ ERYTHROID PROGENITOR CELLS

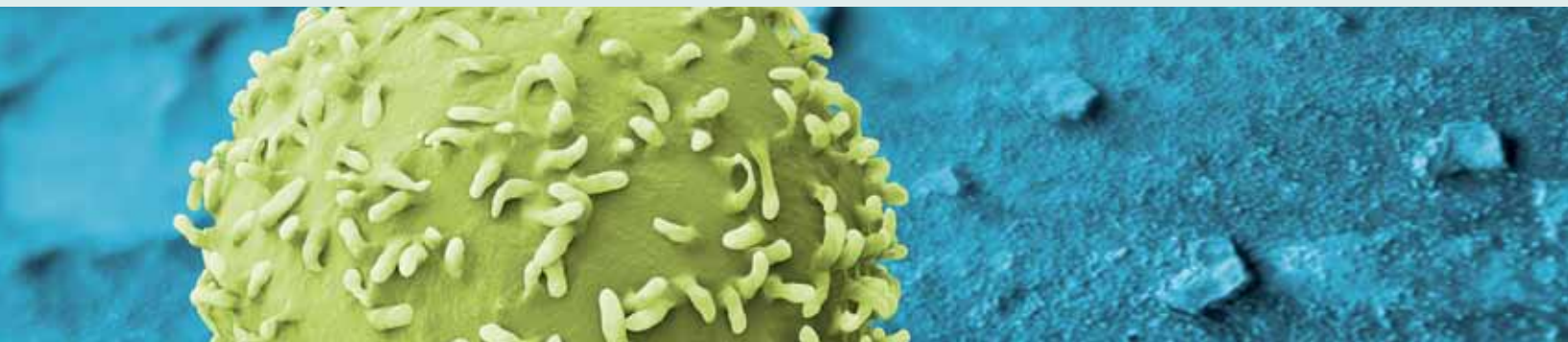


Bone Marrow CD36+ Erythroid Progenitor Cells (BM-CD36) are derived from bone marrow CD34+ cells. First, CD34+ cells are positively selected using immunomagnetic anti-CD34 microbeads from bone marrow mononuclear cells. The isolated BM-CD34+ cells are cultured in StemSpan™ SFEM, a serum-free expansion media for hematopoietic cells, supplemented with SCF, EPO and IL-3. Cultured cells are harvested after 10 days and BM-CD36+ cells are positively selected using immunomagnetic anti-CD36 microbeads.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	BM0400F	1 million/vial	\$624
	BM0401F	2.5 million /vial	\$1,560
Cryopreserved	BM0400C	1 million/vial	\$594
	BM0401C	2.5 million /vial	\$1,485

# BONE MARROW

## CD105+ ENDOTHELIAL CELLS

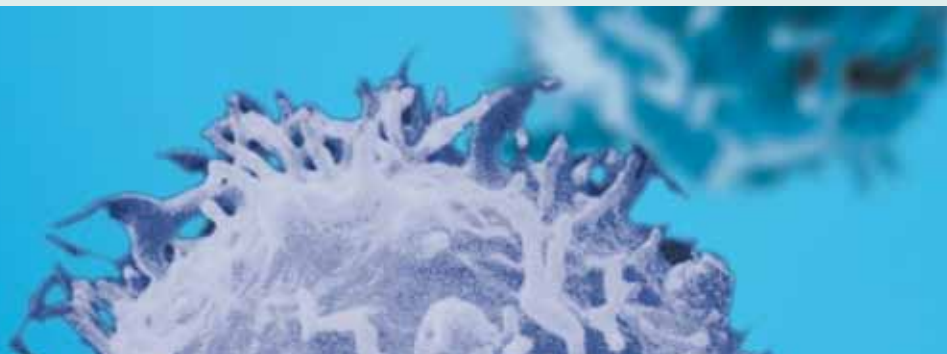


Bone Marrow CD105+ Endothelial Cells (BM-CD105) are positively selected using immunomagnetic anti-CD105 microbeads from bone marrow mononuclear cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	BM1800F	0.2 million/vial	\$554
	BM1801F	0.3 million/vial	\$832
Cryopreserved	BM1800C	0.2 million/vial	\$526
	BM1801C	0.3 million/vial	\$790

# BONE MARROW

## CD133+ STEM/PROGENITOR CELLS

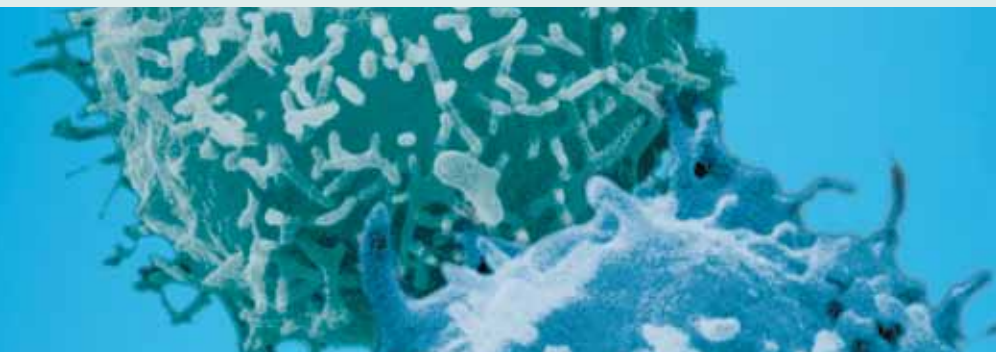


Bone Marrow CD133+ Stem/Progenitor Cells (BM-CD133) are positively selected using immunomagnetic anti-CD133 microbeads from bone marrow mononuclear cells.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	BM0600F	0.5 million/vial	\$1,137
	BM0601F	1 million/vial	\$2,273
	BM0602F	2 million/vial	\$4,545
	BM0603F	5 million/vial	\$11,362
Cryopreserved	BM0600C	0.5 million/vial	\$1,107
	BM0601C	1 million/vial	\$2,214
	BM0602C	2 million/vial	\$4,427
	BM0603C	5 million/vial	\$11,068

# BONE MARROW

## MESENCHYMAL STEM CELLS

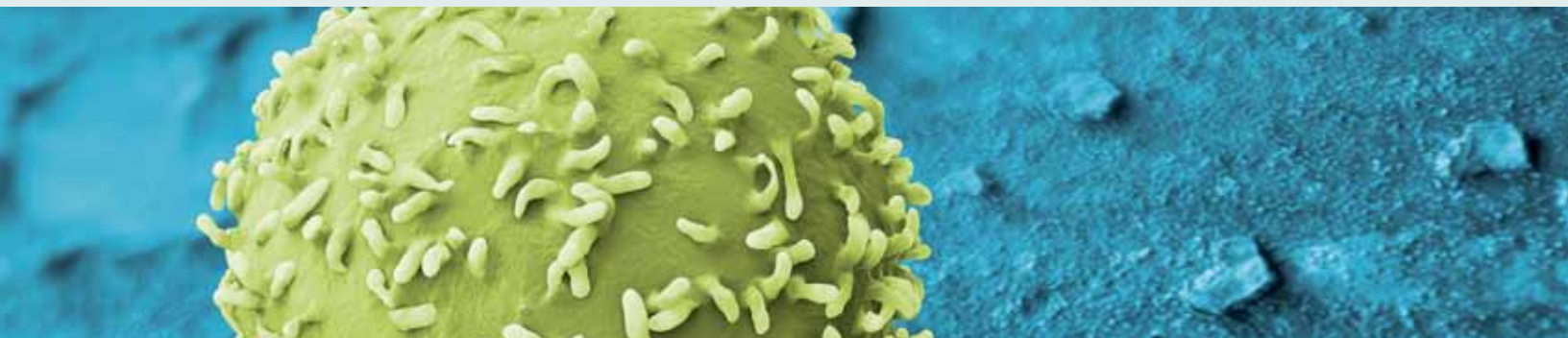


Bone Marrow Mesenchymal Stem Cells (BM-MSC) are derived from bone marrow mononuclear cells in the first culture passage. Cultured BM-MSC cells are CD73, CD90 and CD105 positive in addition to being CD14, CD34, CD45 and HLA-DR negative.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	BM0500F	1 million/vial	\$929
	BM0501F	2.5 million /vial	2,320
Cryopreserved	BM0500C	1 million/vial	\$845
	BM0501C	2.5 million /vial	\$2,112

# BONE MARROW

## MONONUCLEAR CELLS

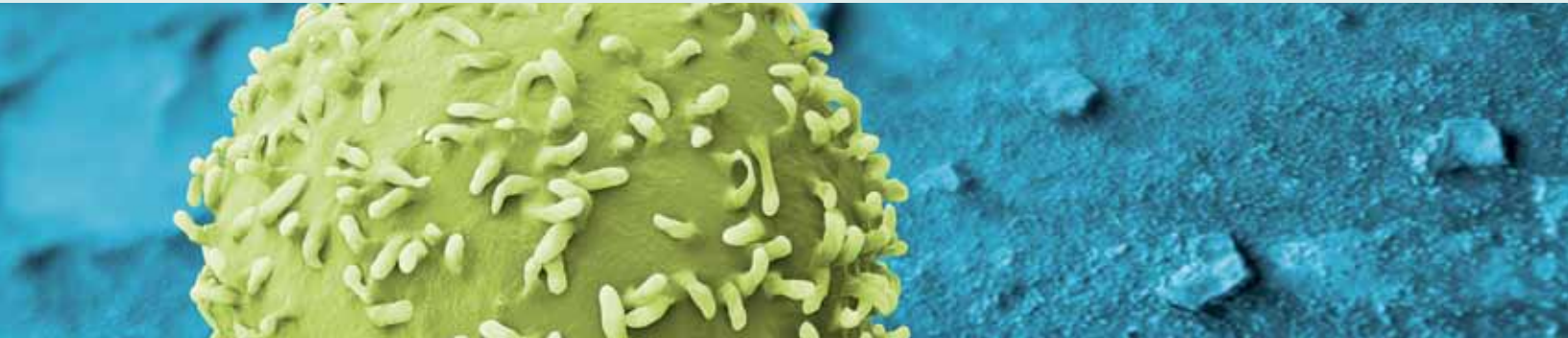


Bone Marrow Mononuclear Cells (BM-MNC) are isolated from whole bone marrow using density gradient centrifugation.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	BM0001F	100 million/vial	\$631
	BM0002F	300 million /vial	\$1,691
Cryopreserved	BM0001C	100 million/vial	\$599
	BM0002C	300 million /vial	\$1,606

# BONE MARROW

## WHOLE BONE MARROW



Bone Marrow Whole (BM) is collected from the posterior iliac crest up to a maximum of four sites, 25mL per site. Bone marrow is drawn with a 30cc syringe and anticoagulated with Heparin.

Format	Catalog #	QTY/Unit	Price/Unit
Fresh	BM0900F	20 mL	\$760
	BM0901F	40 mL	\$1,520
	BM0902F	50 mL	\$1,618
	BM0903F	100 mL	\$2,945
Cryopreserved	BM0900C	20 mL	\$722
	BM0901C	40 mL	\$1,445
	BM0902C	50 mL	\$1,537
	BM0903C	100 mL	\$2,798

# TERMS AND CONDITIONS

## General Terms:

1. These outlined conditions regarding sale and delivery from StemExpress, LLC apply to all contracts of supply between StemExpress, LLC and our clients.
2. The Client is deemed to agree to these conditions of sale and delivery upon acceptance of the good supplied.
3. Any rights awarded to the Client arising during the course of business with StemExpress, LLC are not transferable.
4. Any amendment to the conditions of sale and delivery, or any recognition of the Client's conflicting purchase conditions must be confirmed in writing by StemExpress, LLC.
5. This Agreement constitutes the entire and exclusive agreement between the parties.
6. This Agreement shall be governed by and interpreted under the laws of the State of California, and venue for any dispute arising hereunder shall be in the County of Sacramento.
7. The prevailing party in any action to enforce the terms of this Agreement shall be entitled to reimbursement by the other party for all costs, including the reasonable attorney fees and professional fees, incurred in connection with such proceeding.
8. Any donor information obtained by StemExpress, LLC is privileged, and StemExpress, LLC treats donor information as confidential in order to preserve the anonymity of the donor. StemExpress will provide Researcher with only minimal and non-privileged information regarding donors.

## Prices:

1. StemExpress, LLC prices are subject to change without prior notice. Please contact us to confirm current pricing with StemExpress, LLC.
2. All shipping and handling charges will be reflected on the invoice upon the delivery of product. Shipping and handling charges will vary according to the weight of the package and the shipping options. Please contact StemExpress, LLC directly for current shipping and handling prices.

## Delivery:

1. All orders are shipped via Federal Express Priority Overnight delivery unless otherwise specified.
2. Estimated delivery times can be specified; however, estimated delivery times are not legally binding.
3. Same day delivery is available in the Northern California Area with prior arrangement with StemExpress, LLC.
4. All deliveries take place at the Client's risk. The transfer of risk occurs on the handing over of the goods to the carrier or shipper, even where StemExpress, LLC is providing courier service. The course of delivery method is at the discretion of StemExpress, LLC with exclusion of any and all liability.

\* For the the most current Terms and Conditions, please refer to our website at [www.stemexpress.com/terms-conditions/](http://www.stemexpress.com/terms-conditions/)

# TERMS AND CONDITIONS

## Payment:

1. Payment on goods is to be made within 30 days of delivery of the bill.
2. Invoices not paid within the Net 30 terms are subject to an initial 10% late fee of the balance. In addition, any invoices not paid within 60 days from the date of the invoice are also subject to a 1.5% per month (18% annum) interest fee, compounded monthly.
3. Failure of payment within 120 days may result in legal and/or collection proceedings upon the expiration of the payment period without further warning.
4. StemExpress, LLC accepts only US currency in the form of company checks, cashier checks, money orders, and VISA or MasterCard payments. Credit card fees apply. All funds must be able to be withdrawn from a US bank account; foreign bank accounts and foreign currency will not be accepted as appropriate payment. Please make checks payable to StemExpress, LLC.
5. If StemExpress, LLC conditions of payment are not complied to, or if justifiable concerns exist in regard to the Client's ability or willingness to pay, StemExpress, LLC is entitled to deem any contract with the Client null and void. In addition, all outstanding claims the Client may have with StemExpress, LLC will become due. Justifiable concerns referred to the above include, but are not restricted to: initiation of insolvency or bankruptcy proceedings, deterioration of financial circumstances, and default of payment for any other reason.

## Use of Goods:

1. All products received from StemExpress, LLC are intended exclusively for in vitro use only. These products are not intended for use on human beings. Please note that any use of StemExpress, LLC products for any purpose other than intended including use for therapeutic or diagnostic purposes will result in legal ramifications.
2. StemExpress, LLC does not accept any liability for the improper use of our products. We deliver our products only to research and teaching institutions, commercial enterprises, and public researchers. Any signs of improper use of StemExpress, LLC products by a client will result in refusal of delivery and termination of any contract associated with this client.
3. StemExpress, LLC opposes any research in violation of any ethical, legal, or governmental standards within the United States and the import countries of our clients. We do not accept any liability for such research or use by our clients.

\* For the the most current Terms and Conditions, please refer to our website at [www.stemexpress.com/terms-conditions/](http://www.stemexpress.com/terms-conditions/)



# TERMS AND CONDITIONS

## Liability:

1. StemExpress, LLC represents and warrants that it has (1) obtained ownership rights with respect to products and that such products were provided to StemExpress, LLC with every donor's informed consent and in compliance with all applicable laws and regulations, (2) obtained all necessary and appropriate releases from the donor wherein there are no restrictions on use of products that would prohibit clients from using them in any commercial pharmaceutical research, (3) complied with all applicable United States and foreign statutes and their respective rules and regulations in connection with handling, export, import, and use of the products.
2. StemExpress, LLC represents and warrants that it has no obligation to any third party that would interfere with StemExpress, LLC providing products to clients. In addition, any products that StemExpress, LLC provides to clients are not the proprietary property of any third party.
3. In no event will StemExpress, LLC be liable to a client or anyone else for any damages or injury resulting from the use or misuse of our products, nor for any action taken by a client relying on information, either verbal or written, from any source.
4. The Client agrees that StemExpress, LLC's liability, if any, for damages (including liability, arising from physical or mental harm, caused by any product liability, arising out of contract, negligence, strict liability or tort) shall not exceed the cost of the product, which the Client purchased from StemExpress, LLC. 5. The Client agrees to indemnify and to hold harmless, StemExpress, LLC and all other parties involved, including their owners, officers, affiliates, associates, and employees for any and all damages incurred as a result of the products used. These parties shall not be liable under any circumstances.
5. By ordering any products from StemExpress, LLC, the Client acknowledges the above terms, conditions, and disclaimers, included but not limited to the above disclaimers and any additional warnings and cautions. The Client agrees to carefully abide by these terms, conditions, and disclaimers.

## Warranty:

1. StemExpress, LLC warrants that our products will meet the claimed product specifications, such as viability, number of viable cells, and purity. StemExpress, LLC does not warrant any biological properties associated with our products.
2. StemExpress, LLC will replace any products validated with flowcytomtery that do not meet the specifications claimed on our certificate of analysis free of charge, or refund the purchase price. In no event shall StemExpress, LLC's liability exceed the purchase price paid by the Client.
3. StemExpress, LLC shall not be liable for any damages or injuries to persons or property arising from the use of its products. StemExpress, LLC is not liable for a product that has been misused or has been rendered unusable due to improper storage or handling.
4. All StemExpress, LLC products are "For In Vitro Research Use Only" and are neither approved for human nor veterinary use in vivo, diagnostic, nor clinical applications.
5. This limited warranty has a one-year period starting from the time of shipment.
6. StemExpress, LLC's products are not permitted for re-sale without written authorization from StemExpress, LLC.

\* For the the most current Terms and Conditions, please refer to our website at [www.stemexpress.com/terms-conditions/](http://www.stemexpress.com/terms-conditions/)

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\*All high resolution pictures on pages 12-65, including the front and back cover, were provided by Miltenyi Biotec. We would like to thank them for their continued support of StemExpress.



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