

PRODUCT CATALOG 2022



A Pioneer in Providing Hematologic and Immunological Material to Researchers

Since its inception in 1998, AllCells has been a forward-thinking company with a fervent focus on providing the highest quality cells for biomedical researchers. Founded by Jay Tong, MD, AllCells was the first to provide a comprehensive portfolio of commercially available blood and bone marrow-derived primary cells including mobilized Leukopak products to the market. This pioneering spirit led to the creation of a robust donor management system, optimized protocols for isolating human cells and the collection of human tissues in compliance with GMP, FDA, and AABB.

Consider AllCells part of your research team – helping you achieve your research goals with the flexibility to meet specific, customized needs. Our expertise in Research Grade and GMP-compliant Clinical Grade products are leveraged by biomedical researchers in cell and gene therapy, immuno-oncology, stem cell therapy, and contract development manufacturing organizations.

*We understand the biomedical market
and provide GMP-compliant & Research
Use Products to accelerate research.*

Jay Tong, MD, Founder and Chairman

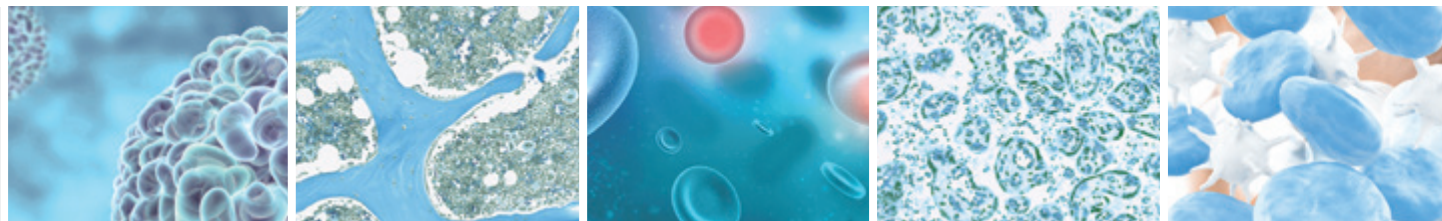




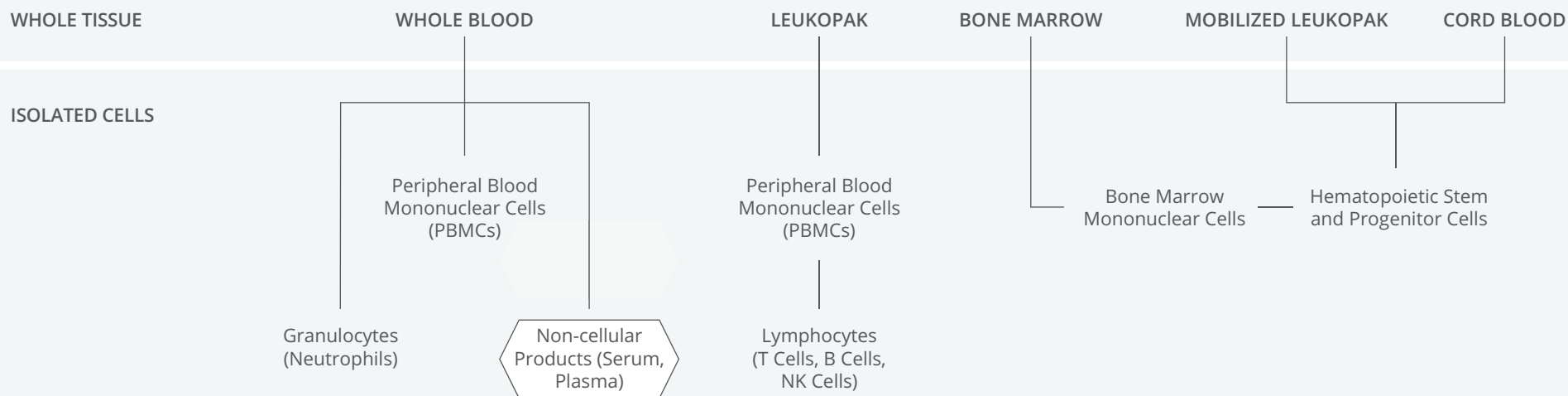
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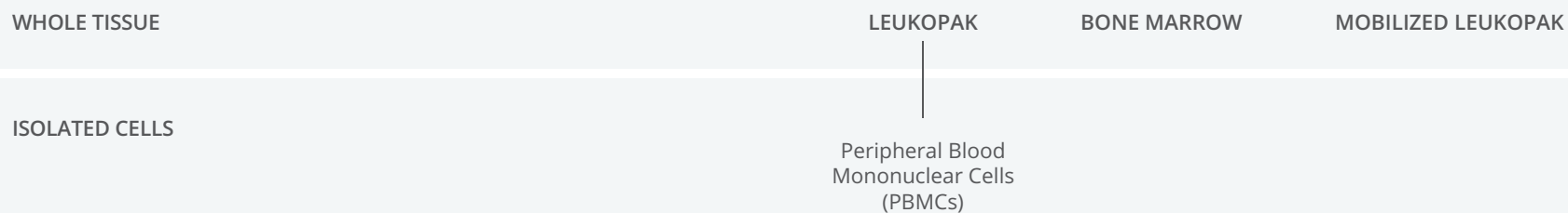
Product Overview



RESEARCH GRADE



CLINICAL GRADE



Products are available in fresh, frozen, or cryopreserved formats from healthy human donors.

GMP-compliant

Clinical Grade Products



GMP-compliant
Clean Room



FDA-registered,
AABB Compliance



Extended Virals



Competitive
Pricing

RELIABLE AND TRUSTED GMP SUPPLIER

With over 5 years of GMP expertise and over 20 years in the industry, AllCells is your reliable and trusted supplier of high-quality GMP compliant starting material to support your cell therapy commercialization journey.

ROBUST AND ASSURED SUPPLY CHAIN

AllCells' dynamic and continuously expanding donor pool and facilities provides you continuous and assured access to high-quality starting material to support scalability throughout your product lifecycle.

INTEGRATED PROJECT MANAGEMENT

Our dedicated GMP team of scientists, clinicians, quality and logistics experts will partner with you to define, design and manage your project to deliver a product that meets your specific needs.

LARGEST RECALLABLE GMP DONOR DATABASE

AllCells cultivates the largest repository of healthy, recallable donors to fulfill a diversity of clinical parameters selected in compliance with FDA current Good Tissue Practices (cGTP) regulations under 21 CFR 1271.

GMP Product Portfolio



HIGH QUALITY, CONSISTENT, GMP-COMPLIANT PRODUCTS

Our products undergo stringent quality control to ensure that they meet our high quality standards and minimize sources of variability. All our GMP products are collected from qualified, healthy and consenting donors per IRB-approved protocols and processed in our FDA-registered, GMP-compliant and accredited collection and processing clean room facilities with robust quality systems, meeting all regulatory compliance requirements. All our GMP-compliant products are subjected to an extensive quality review and are provided with supporting extended documentation during batch release.

GMP-COMPLIANT FRESH & CRYOPRESERVED LEUKOPAK

GMP-compliant Leukopaks are collected from healthy human donors using the Spectra Optia Apheresis System directly into ACD-A anticoagulant. GMP Leukopak products are quality controlled for: volume, viability, total nucleated cell count, and sterility (USP71). The product is shipped using a validated shipping container.

GMP-COMPLIANT CLINICAL GRADE BONE MARROW

GMP-compliant Bone Marrow is collected from healthy, human donors by needle aspiration from the posterior iliac crest with heparin GMP Bone Marrow products are quality controlled for: volume, viability, total nucleated cell count, and sterility (USP71). The product is shipped using a validated shipping container.



COMING SOON

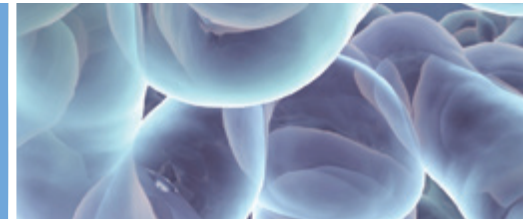
- GMP-compliant mobilized-Leukopaks
- GMP-compliant PBMCs

Leukopak

Leukapheresis products are highly enriched in mononuclear cells (MNC) and are a great source for large quantities of leukocytes. Peripheral blood is collected by leukapheresis from healthy and consenting donors using the Spectra Optia® Apheresis System following an IRB-approved protocol. Mononucleated cell-rich blood is continuously collected using ACD-A as an anticoagulant. During collection, autologous plasma is combined with apheresed cells at a 4:6 ratio. This procedure results in large yields of single-donor MNC, allowing for scalability and reproducibility of experiments. Leukopaks typically contain up to 50% T cells, 20% monocytes, 10% B cells, 10% NK cells, 3% granulocytes, and 3% hematocrit. Actual percentages will vary from donor to donor. All products are quality controlled for viability and are determined using a validated AO/PI protocol. The viability of cryopreserved cell products is determined post-thaw. All cryopreserved cell products are delivered in 2mL cryovials.



Leukopak



APPLICATIONS

Cell-based assays (proliferation, T cell activation, etc.), cell therapy process development, and biomarker discovery.

PRODUCT SPECIFICATIONS

Our Leukopak products are offered in fresh or cryopreserved and in different formats:

- Whole Apheresis Tissue
- Mononuclear Cells
- Subpopulations: T Cells, B Cells, NK Cells, and Monocytes

PRODUCT	FRESH	CRYOPRESERVED
Whole	2.5B, 5B, 10B, Quarter Pak, Half Pak, Full Pak	2.5-3.0B, Full Pak, Custom
MNC	100M, 300M, 2B, 4B, 7B	10M, 25M, 50M, 100M
CD14+ Monocytes NS	10M, 50M	10M, 50M
CD14+ Monocytes PS	10M, 50M	10M, 50M
CD19+ B, NS	10M	10M
CD19+ B, PS	10M	10M
CD19+/IgD+ Naive B, NS	1M	1M
CD3+ Pan T, NS	25M	25M
CD4+ Helper T, NS	25M	25M
CD4+/CD45RA Helper T, NS	5M	5M
CD4+/CD45RO+ Memory T, NS	5M	5M
RegT(CD4+CD127lowCD25+), PSNS	—	1M
CD8+ Cytotoxic T, NS	10M	10M
CD8+ Cytotoxic T, PS	—	10M
CD8+/CD45RA+ Naive Cytotoxic, NS	5M	5M
CD8+/CD45RO+ Memory T, NS	—	5M
CD56+ NK, NS	5M	5M
CD56+ NK, PS	5M	5M
Platelets	5B	—

Cell type, cell selection method, and unit size (by volume or cell count) vary depending on format.

Introducing Cryopreserved Leukopaks

MAINTAIN FLEXIBILITY IN YOUR WORKFLOW WITHOUT COMPROMISING QUALITY.

With AllCells' new Cryopreserved Leukopaks, you have access to high-quality primary cells whenever you need them without worrying about potential delivery delays that can be associated with fresh cells. When stored properly, cryopreserved Leukopaks allow for prolonged storage affording you flexibility in your workflow without compromising on quality.

A key advantage with AllCells' Cryopreserved Leukopaks is that our acquisition and manufacturing facilities are adjacent to each other. This enables the leukapheresis material to be immediately cryopreserved in CryoStor® CS10 (GMP-grade cryopreservation medium) or any other cryoprotectants that customers require to maintain cell viability between collection and processing events.



HIGH QUALITY CELLS

Superior TNC and cell viability due to on-site processing facilities, which mitigate loss of fidelity prior to cryopreservation.



STATE-OF-THE-ART CRYOPRESERVATION

Cells are cryopreserved using a controlled rate GMP-compliant VIA Freeze Quad controlled-rate freezer, which enables consistently high post-thaw recovery and viability.



DEPENDABLE COLD CHAIN LOGISTICS

AllCells utilizes CryoPort LN₂ Dry Shippers for dependable end-to-end shipping logistics.



FLEXIBILITY

Cryopreserved cells give you the flexibility to do experiments on your schedule without waiting on delivery of fresh cells.



Product	LP, CR, Solo 2.5-3.0B	LP, CR, Full Pak, Custom
Description	Leukapheresis material cryopreserved in CS10	Leukapheresis material cryopreserved per custom specification
Pre-cryopreservation TNC	2.5 - 3B	Custom
Fill Volume	NMT 70mL per CS250 cryo bag	Custom
Sampling Vials	1	Custom
Certificate of Analysis	CBC, IP, Cell count, viability	Custom

**Donor variability applies*



Mobilized Leukopak

Mobilized Leukopaks are apheresis products collected from healthy and consenting donors treated with FDA-approved drugs to stimulate the mobilization of CD34+ hematopoietic stem and progenitor cells (HSPC). Mobilized peripheral blood enriched in single-donor CD34+ HSPCs is collected through leukapheresis using the Spectra Optia® Apheresis System's continuous flow centrifugal technology. Approximately 120mL of autologous plasma is combined with apheresed cells. The product is filled to deliver a nominal 280mL in a blood bag. This procedure results in large-scale yields of single-donor CD34+ HSPCs. AllCells offers Mobilized Leukopaks with different mobilization regimens, including G-CSF (Neupogen®), plerixafor (Mozobil®), or a combination of the two drugs. Actual TNC concentration and CD34+ percentage vary based on donors' response to mobilization and from collection to collection.



Mobilized Leukopak



APPLICATIONS

A mobilized leukopak is an excellent source of CD34+ hematopoietic stem and progenitor cells and is increasingly selected for its ease of collection and accessibility. These cells are used in research and process development in areas of hematopoiesis, humanized mouse model generation, and reprogramming.

PRODUCT SPECIFICATIONS

Our Leukopak products are offered in fresh or cryopreserved and in different formats:

- Whole Tissue Apheresis
- Isolated Cells: CD34+ HSPCs

PRODUCT	REGIMEN DETAILS	FRESH	CRYOPRESERVED
mLP Reg F	Neupogen x 5 days	1 Pak, 2 Pak	—
mLP Reg H	Neupogen x 5 days, + Mozobil x 2 days	1 Pak, 2 Pak	—
mLP Moz A (Mozobil)	Mozobil x 1 day (11 hrs between injection and collection, 1 collection)	1 Pak	—
mLP Moz B (Mozobil)	Mozobil x 2 days (11 hrs between injection and collection, 2 collections)	2 Paks	—
mLP Moz C (Mozobil)	Mozobil x 1 day (6 hrs between injection and collection, 1 collection)	1 Pak	—
mLP Moz D (Mozobil)	Mozobil x 2 days (6 hrs between injection and collection, 2 collections)	2 Paks	—
Reg F CD34+, PS	Neupogen x 5 days	—	0.5M, 1M, 5M, 10M, 25M
Reg H CD34+, PS	Neupogen x 5 days, + Mozobil x 2 days	—	1M, 5M

Cell type, cell selection method, and unit size (by volume or cell count) vary depending on tissue format.

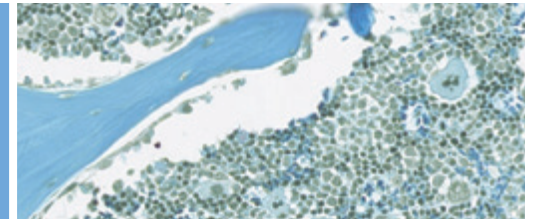
Bone Marrow

Bone marrow is an excellent source of CD34+ hematopoietic stem and progenitor cells (HSPCs) and mesenchymal stem cells. It is the primary site of hematopoiesis in adults, the process of mature blood cell formation from HSPCs to maintain blood homeostasis.

On average, bone marrow is composed of 70% granulocytes, 10% T cells, 3% B cells, 5% monocytes, and 0.8% CD34+ hematopoietic stem and progenitor cells (HSPCs). The total nucleated cell count, concentration, and cell type percentages vary from donor to donor. AllCells Bone Marrow products are quality controlled for cell count and viability determined using a validated AO/PI protocol.



Bone Marrow



The average CD34+ frequency from bone marrow is 0.8%.
Bone Marrow is the most well characterized HSPC source with historical precedence.

APPLICATIONS

Bone marrow cells, are used for research in hematopoiesis, erythropoiesis, humanized mouse models for multiple types of diseases, and ex vivo expansion studies.

PRODUCT SPECIFICATIONS

Bone Marrow products are collected by qualified clinicians from the posterior iliac crest of healthy and consenting donors following IRB-approved protocols. Bone Marrow is available in fresh, cryopreserved, and in different formats:

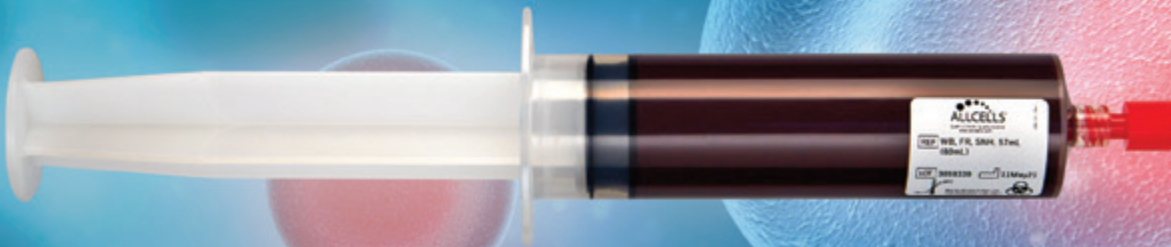
- Whole Tissue: Fresh
- Isolated Cells: Mononuclear Cells (PBMCs) and positively selected CD34+ HSPCs

PRODUCT	FRESH	CRYOPRESERVED
Whole	3mL, 10mL, 25mL, 50mL, 100mL	—
MNC	25M	5M, 10M
CD34+ PS	1M, 2M	0.5M, 1M, 2M
CD34+ Depleted MNC	100M	100M

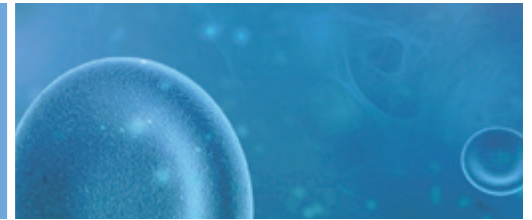
Cell type, cell selection method, and unit size (by volume or cell count) vary depending on format.

Whole Blood

Whole human peripheral blood contains red blood cells, white blood cells, plasma, and platelets. Whole Blood products are collected by venipuncture of healthy and consenting donors following IRB-approved protocols. Whole Blood products are based on the anticoagulant used during collection (ACD-A, Sodium Citrate, Heparin, and EDTA).



Whole Blood



APPLICATIONS

Whole Blood products are used in a wide range of applications. Cellular products are used for cell-based assays, fundamental research, process development, and screening donors for leukapheresis products.

PRODUCT SPECIFICATIONS

Non-cellular products such as serum and plasma are valuable for antibody research, and serum-based molecule studies (proteins, hormones, cholesterol).

Pre-screening options
available for Research
Grade and GMP-
compliant products.

PRODUCT	FRESH	CRYOPRESERVED
ACD-A, Transfer Bag	162mL, 216mL, 270mL, 324mL, 378mL	—
ACD-A, Syringe	54mL	—
ACD-A, Vacutainer	8.5mL	—
Na Citrate, Transfer Bag	144mL, 192mL, 240mL, 288mL, 336mL	—
Na Citrate, Syringe	48mL	—
Na Citrate, Vacutainer	4.5mL	—
Heparin, Transfer Bag	171mL, 228mL, 285mL, 342mL, 399mL	—
Heparin, Syringe	57mL	—
Heparin, Vacutainer	10mL	—
EDTA, Vacutainer	10mL	—
SST, Vacutainer	8.5mL	—
PAXgene DNA, Vacutainer	8.5mL	—
Streck Cell-Free DNA BCT	10mL	—
WB MNCs	nominal, custom	nominal, custom
Neutrophils, NS	25M	—
Mature Erythrocytes (RBC)	50M	—
Plasma	3ml (nominal)	3ml (nominal)
Serum	4ml (nominal)	4ml (nominal)

Cell type, cell selection method, and unit size (by volume or cell count) vary depending on tissue format.

Cord Blood

Cord Blood products are collected from a single umbilical cord following IRB-approved protocols. Multiple cord blood units may be combined during processing for mixed donor products. AllCells Cord Blood products are derived at the time of delivery from healthy pregnant women and are quality controlled. The stem cell purity is quantified post-thaw using a FACS assay.



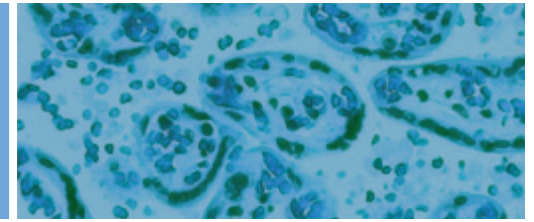
Cord Blood

Cord Blood CD34+ cells are regarded as more naive and primitive, having a higher proliferative engraftment and multipotent potential than other sources.

APPLICATIONS

Cord blood CD34+ cells are a rich source of potent CD34+ cells and used primarily for the generation of humanized mice for research in cancer immunotherapy and gene therapy.

PRODUCT	FRESH	CRYOPRESERVED
CD34+ PS Single	—	1M
CD34+ PS Mixed	—	1M



Donor Management Services

AllCells Donor Management Services takes a consultative approach with cell therapy developers to navigate the intricacies of securing a consistent, long-term supply of starting cellular material to manufacture allogeneic cell therapies. Leveraging AllCells' diverse and curated donor pool and FDA-registered collection and processing facilities provides worry-free end-to-end solutions. Our commitment to GMP standards delivers the quality assurance and regulatory compliance needed for successful clinical translation.



Donor Management Services

COMPREHENSIVE SOLUTIONS

Our team of experts will help you navigate the complexities of donor requirements and provide integrated project management to design a donor pool suitable for your needs now as well as enable the easy transition and bidirectional movement between research and clinical program phases in the future.

COLLECTION AND TESTING

- Materials are collected from healthy and consenting donors by our experienced team of clinicians and registered nurses using IRB-approved protocols
- GMP Leukopaks are collected using the Spectra Optia® Apheresis System directly into ACD-A anticoagulant
- GMP Bone Marrow is collected from the posterior iliac crest via needle aspiration
- AllCells products are quality controlled for cell count and viability using a validated AO/PI protocol and pass a Sterility Test in accordance with USP71 guidelines using compendial testing

REGISTRATIONS & LICENSES

- Tissue Bank License by State of California Department of Public Health
- License for the Production of Biologics by State of California Department of Public Health
- Certificate of Compliance by Clinical Laboratory Improvement Amendments (Alameda)
- FDA registered for HCT/P for: HPC Apheresis, Peripheral Blood Mononuclear Cells
- Certificate of Compliance by Clinical Laboratory Improvement Amendments (Quincy)
- Health Industry Number (Individual License)
- Medical Director and Independent IRB-approved donor consent program



DIVERSE DONOR POPULATION

Age, ethnicity, and other attributes.



SPECIFIC DONOR ATTRIBUTES

Available upon request, including HLA.



RECALLABLE DONORS

For specific research needs.

Made-to-Order Products and Services

AllCells Made-To-Order products and services are here to help you meet the requirements of even the most demanding projects. Our in-house team of experts will help you define, design and deliver your primary cell material to match your study-specific criteria. AllCells collection and processing facilities in the California, Massachusetts, and Texas provide a diverse donor pool, and our contiguous on-site collection and processing allows freshly collected tissues to be immediately processed with unparalleled quality and consistency. From donor collection, lab processing to packaging, this optimized work-flow makes it possible to obtain the highest viability, purity, and cell counts available in the shortest amount of time to maximize product freshness.

Since 1998, AllCells has provided the biomedical research community with high-quality, consistently made products using GMP standards for a wide range of downstream applications and process development in the pharmaceutical, healthcare, biotechnology, and academic sectors.



FRESH CELLS, ON DEMAND

AllCells' on-site collection and processing ensure the shortest lead times to maximize product freshness.



DONOR CARE AND MANAGEMENT

We manage the largest, most diverse donor pool in the industry. You can choose recallable donors with specific attributes to meet your specific criteria.



CELL PROCESSING

Our processing facilities can provide processed cell products with specific cell counts and/or volume, apply unique media, buffers and reagents to meet research-specific isolation protocols.



PACKAGING AND SHIPPING

AllCells uses temperature controlled AeroSafe Global shipping packages ensuring all orders arrive with the integrity and viability that you have come to expect from our products.



YOUR RESEARCH PROJECT

AllCells delivers high-quality, consistent primary cells to enable success for a wide range of research applications and process development.

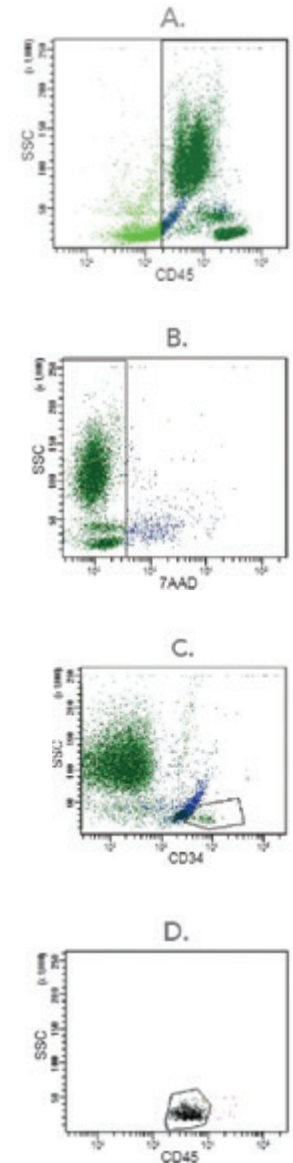
ISHAGE Service

It is important to be able to accurately enumerate CD34+ cells within a heterogeneous cell population because this small subset of cells is responsible for multilineage engraftment. The International Society of Hematotherapy and Graft Engineering (ISHAGE) established a standardized four-parameter flow cytometric method followed by a sequential gating strategy to quantitate CD34+ cells in apheresis products, peripheral blood, and bone marrow used widely in research and clinical settings.

Our CD34+ isolated cell products are assessed and quality-controlled using the standardized ISHAGE protocol to quantify viable CD34+ upon request.

AllCells offers an array of bioservices to accompany your research:

- ISHAGE
- Immunophenotyping
- CBC
- Donor Viral Screenings
- HLA-typing





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