

### Donors

#### Normal Human

We offer a wide range of human biological matrices. Our samples are not only readily available, but customized to your specifications.

- Repeat donors
- Viral tested
- Obtained from FDA licensed donor centers
- Customizable anticoagulants

#### Disease State Human

With over 200 IRB-approved sites around the world we provide sourced material to meet and exceed your expectations.

- Samples across many disease indications
- Sourced from clinical sites
- Ethical and regulatory traceability for each case

#### Animal

Isolated using optimized protocols across multiple species, including:

- Beagle
- Guinea Pig
- Mouse
- Non-human Primate
- Rabbit
- Rat and more

### Quality Control

Post-thaw QC for inventory samples includes:

- Viability over 70%
- Purity over 85%
- Cell count

Donor demographics include:

- Age
- Sex
- Gender
- Disease state samples include full clinical history

## Common Cell Characterizations

- High resolution HLA typing to better understand disease positioning and compatibility for mixed lymphocyte reactions.
- Flow cytometry cell marker analysis analyze surface markers for clusters of differentiation and levels of expression
- Fc receptor genotyping for high/low affinity polymorphism for ADCC Assays

## Cell Product Formats

- Fresh** - Refrigerated, viable cells, limited shelf life, suspended in media to maintain viability
- Frozen** - Non-viable cell pellet, used for molecular and protein studies
- Cryopreserved** - Stored in liquid nitrogen, long term shelf life, suspended in cryoprotectant, slow frozen to maintain viability, can be used for functional testing and *in vitro* assays

## Related Products and Services

### Reagents

**IIR**  
Immunoglobulin Inhibiting Reagent targets against heterophilic antibodies to block their interference in immunoassays.

**HAMA Plasma**  
Human Anti Mouse Antibody (HAMA) Plasma contains a higher than normal titer of the HAMA protein.

**RF**  
Rheumatoid factors are usually IgM antibodies presented in the serum of patients with Rheumatoid Arthritis.

### PHASEZERO® Speciality Research Services

Cell-based Assays including Viability Assay, and Cellular Death Assays

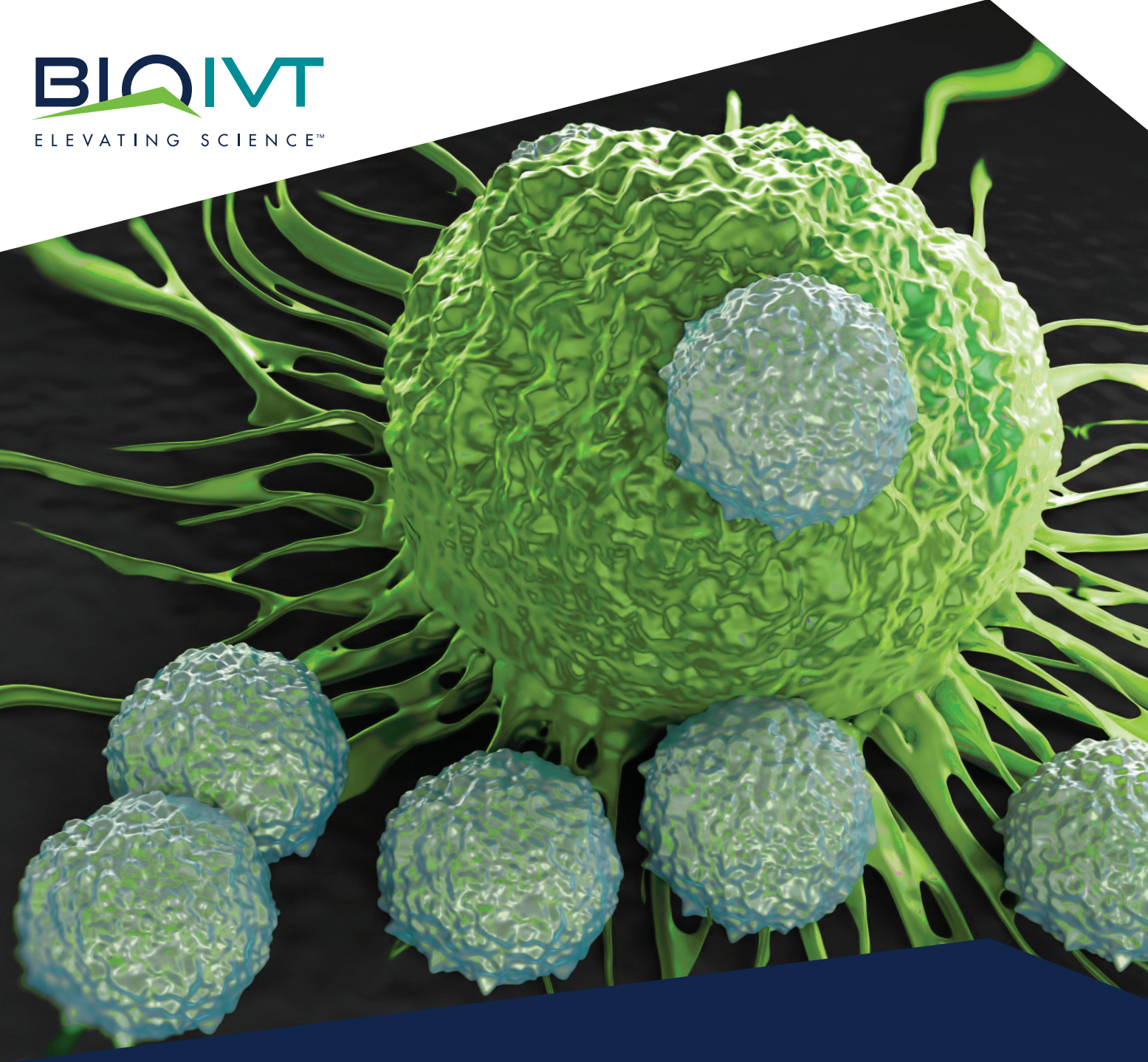
Enzyme Activity Screening, Gene Expression Assays, and Cellular Proliferation Assays.

Check out our additional brochures on [BioIVT.com](http://BioIVT.com)!

BioIVT Brochure

Dissociated Tumor Cells Sell Sheet

PHASEZERO® Research Services Brochure



# Immunology and Immune Cell Products

**BIOIVT**  
ELEVATING SCIENCE™

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# Providing Specialized Products and Services to Accelerate the Immunology Research Continuum

**Cell-based Applications**

- ADCC Assay
- Monocyte Activation Test
- 3D Models
- Viability Assays
- Screening Assays
- Cytotoxicity Assays
- Mixed Lymphocyte Reactions

**Applications:** Disease Modeling, Drug Discovery, Diagnostic, Biomarker Assessment, Regenerative Medicine

- Quality**  
Rigorous quality control processes
- Sourcing Network**  
Provides access to the donors you require
- Optimized Protocols**  
Expertise in cell processing techniques
- Customized Formats**  
Ready to use, fit-for-purpose products

## Quality Products to Fast-Track Your R&D

### PBMCs

Comprehensive portfolio of normal and disease state peripheral blood mononuclear cells (PBMCs) from human and animal species.

#### Mixed Lymphocyte and Monocyte Population

- Normal and disease state PBMCs
- Isolated from peripheral blood collected in a variety of anticoagulants
- Utilization of our cell products can yield a faster-time-to-market as less time will be spent on sample preparation

### LEUKOMAX Apheresis Products

Contains higher concentrations of white blood cells through leukapheresis collection.

#### Normal and Mobilized LEUKOMAX™ Leukopak

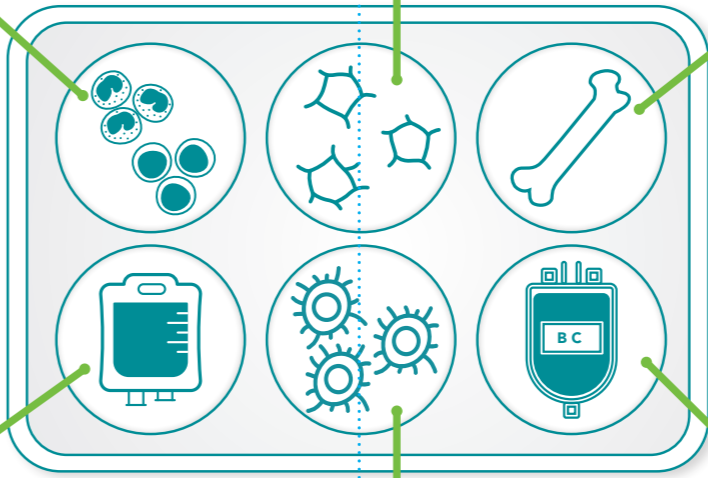
- Best way to yield a high amount of leukocytes
- Mobilized leukopaks provide a greater yield of CD34+ cells due to stimulation of the donor via G-CSF
- Quarter, half, and full packs available and collected utilizing the Spectra Optia Apheresis System

### Purified Cell Subsets

Manufactured using optimized methods to ensure a high quality product with superior viability, purity and functionality.

#### T Cells, B Cells, NK Cells, Monocytes, and more

- Ability to specify preferred isolation method, positive or negative selection
- Isolated cell populations are ideal for researchers looking to perform functional cell-based assays and more



### Hematopoietic Stem Cells

Found in bone marrow, cord blood, and peripheral blood, stem cells can be isolated from human donors and a variety of animal species.

#### CD34+ Hematopoietic Stem Cells isolated from a variety of sources

- Separated from mononuclear cells via positive immunomagnetic separation
- Mobilized leukopak yields more CD34+ than any other blood draw
- Purity determined by flow cytometry and rigorous QC ensures consistent, reliable cell lots
- Also available Bone Marrow Mononuclear Cells (BMMCs) and Cord Blood Mononuclear Cells (CBMCs)

### Dissociated Tumor Cells

Single cell suspensions that are dissociated from a solid tumor using enzymes and mechanical dissociation.

#### Heterogenous Mixture of Cancer Cells and Tumor Infiltrating Lymphocytes (TILs)

- Variety of cohorts include Renal, Ovarian, Liver, Breast, Colon and Lung Cancer
- Provide the closest representation of the clinical scenario
- Matched dissociated cells from normal adjacent tissue and PBMCs often available

### Buffy Coat

Processed from a whole unit of blood, buffy coat bags contain approximately 75-100 mL.

#### Enriched White Blood Cells

- Ability to customize the unit based on any donor requirements or protocol needs
- Collected from consented donors under IRB-approved protocols in use at our FDA licensed donor centers
- Viral and pathogen tested\*

\*All human products are viral and pathogen tested except for clinically collected material.

Visit [BioIVT.com](http://BioIVT.com) to view our ready-to-ship inventory.