

Common Cell Characterizations

- High-resolution HLA typing to better understand disease positioning and compatibility for mixed lymphocyte reactions
- Flow cytometry cell marker analysis to 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 cryopreservant, slow freeze 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® Specialty Research Services

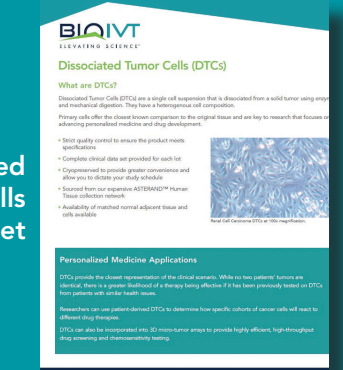
- Cell-based Assays including Viability Assays and Cellular Death Assays
- Enzyme Activity Screening, Gene Expression Assays, and Cellular Proliferation Assays.



Check out our additional brochures on BioIVT.com!



BioIVT Brochure

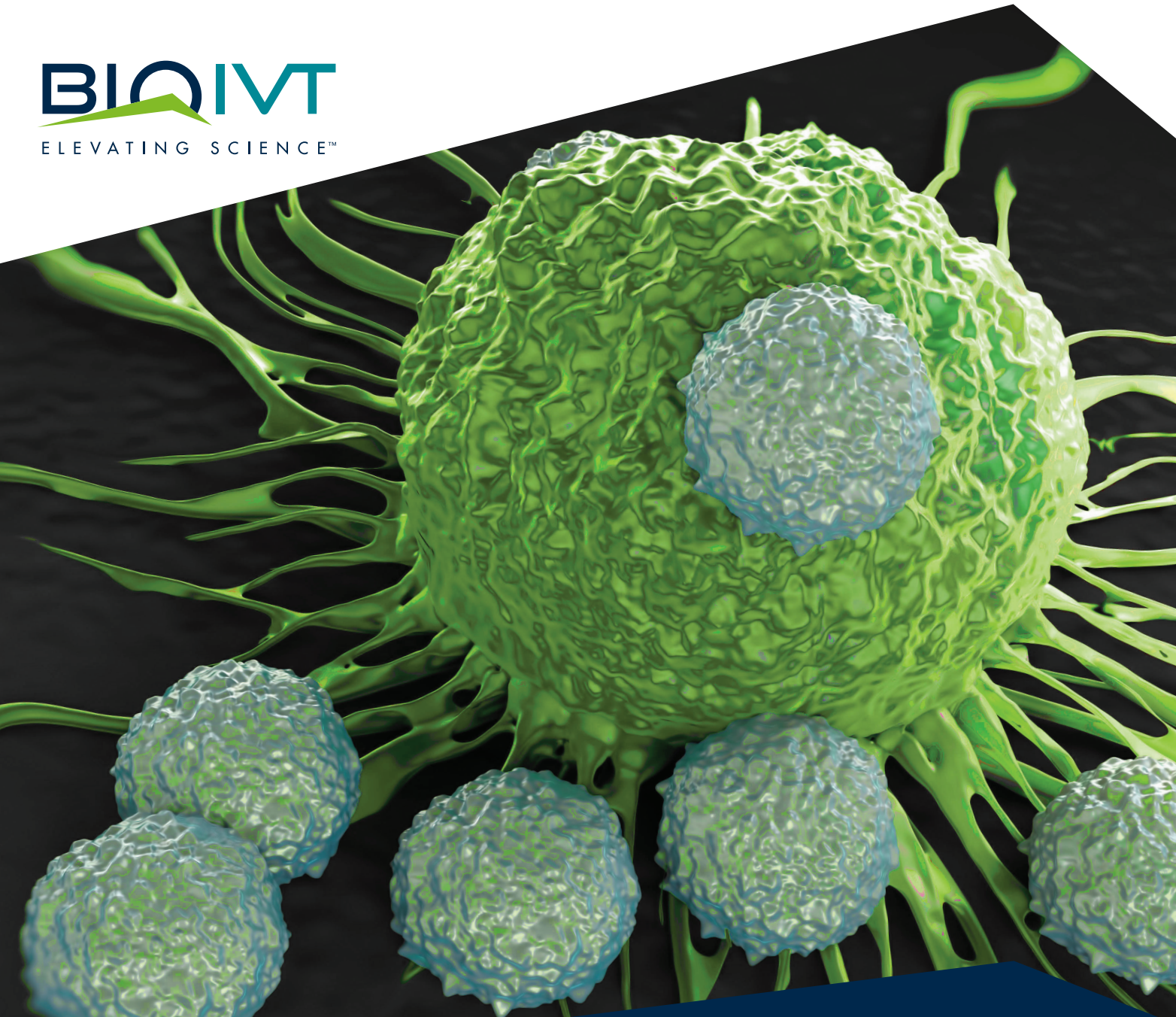


Dissociated Tumor Cells Sell Sheet



PHASEZERO® Research Services Brochure

Your Partner in ELEVATING SCIENCE



Immunology and Immune Cell Products

BioIVT.com

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Donors

Normal Human	Disease State Human	Animal
<p>We offer a wide range of human biological matrices. Our samples are not only readily available, but customized to your specifications.</p> <ul style="list-style-type: none"> • Repeat donors • Viral tested • Obtained from FDA licensed donor centers • Customizable anticoagulants 	<p>With over 200 IRB-approved sites around the world, we provide sourced material to meet and exceed your expectations.</p> <ul style="list-style-type: none"> • Samples across many disease indications • Sourced from clinical sites • Ethical and regulatory traceability for each case 	<p>Isolated using optimized protocols across multiple species including:</p> <ul style="list-style-type: none"> • 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
 - Gender
 - Samples from diseased donors include full clinical history



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BioIVT.com

Providing Specialized Products and Services to Accelerate the Immunology Research Continuum

Cell-based Applications

- ACD Assay
- Monocyte Activation Test
- 3D Models
- Viability Assays
- Screening Assays
- Cytotoxicity Assays
- Mixed Lymphocyte Reactions
- Biomarker Assessment

Applications: Disease Modeling, Drug Discovery, Diagnostic, 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).

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

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

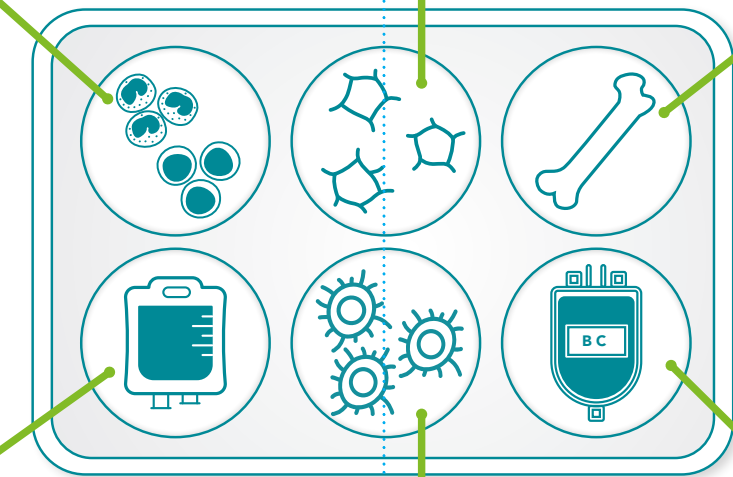
- Ability to specify preferred isolation method; positive or negative selection
- Isolated cell populations are ideal for researchers looking to perform functional cell-based assays and more

CD34+ 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.

Bone Marrow Mononuclear Cells (BMMCs), Cord Blood Mononuclear Cells (CBMCs)

- 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



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 yield a higher number of CD34+ because donors are injected with G-CSF (e.g. Neupogen®) prior to donation
- Quarter, half, and full packs available and processed using a Spectra Optia® apheresis machine

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 normal adjacent tissue and cells available

Buffy Coat

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

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 to view our ready-to-ship inventory.