

Clinical Trial Biospecimen Processing

Central Laboratory Services



The Importance of Biospecimens

Biospecimens collected from participants during a clinical trial provide investigators with crucial information. As a biological snapshot they offer researchers the data needed to effectively and safely run a trial, to monitor and evaluate treatment response, and to provide the necessary information to support pipeline development and regulatory approval. The correct management and handling of your precious biospecimens is therefore vital.

Your biospecimen processing partner

Successful biospecimen collection, processing, and investigation requires 3 essential elements: logistical support, consistent, and validated laboratory processes, and expertise in the appropriate investigative approach. Finding partners to oversee each element can be costly and time consuming. A central laboratory service can be the solution, providing a single project management team and a range of optimized and validated services to ensure the integrity of both biospecimens and data.

REPROCELL's global footprint, 24/7 laboratory availability, and decades of experience in handling and analyzing a range of biospecimens to GLP/GCLP quality standards provides the expert Central Laboratory support you need to achieve your clinical objectives.

Biospecimen Sample Types

We can receive and handle a range of primary sample types including:

Whole blood

Serum

Fresh tissue and biopsies

Sputum

Mouth wash

Nasal swabs

Urine

Faeces (stools)

www.reprocell.com

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Whole Blood Processing Services

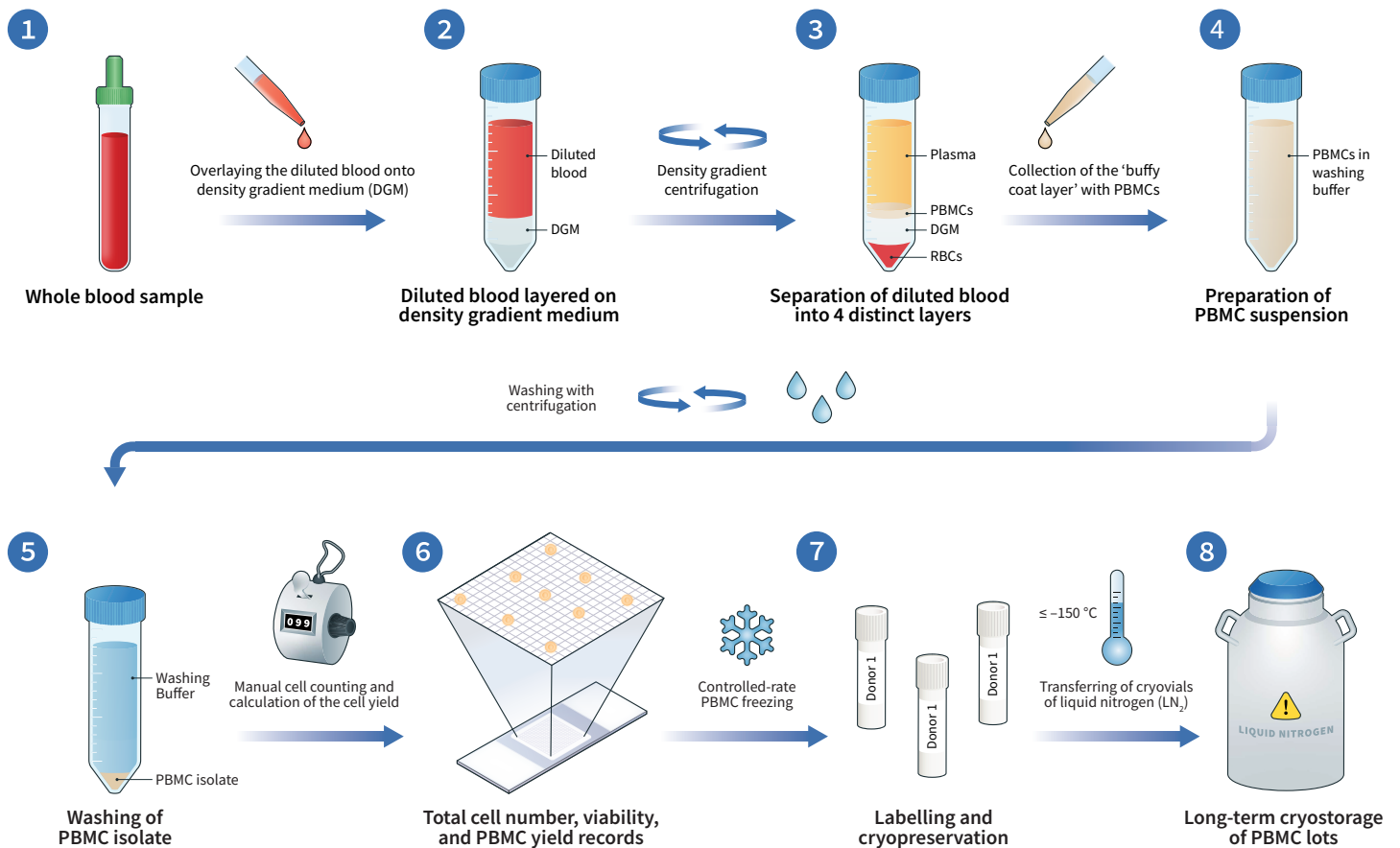
Our scientists can process blood samples to generate mononuclear cells with high viability and purity, plasma, or serum. Working to GCLP standards, we can derive high quality mononuclear cells from whole blood using low ionic strength diluents and density gradient centrifugation methods.

PBMC Isolation

Peripheral blood processing to generate peripheral blood mononuclear cells (PBMC), plasma or serum, is an important first step in many clinical research studies. Investigation of disease associated biomarkers, cellular interactions, immune response mechanisms and pathways etc. all require high quality starting materials to ensure project success. Working to GCLP standards, whole blood processing in our fully equipped BSL2 laboratory is both rapid, and efficient, ensuring minimal degradation and maximal yield.

Methodology

Our process employs a standard gradient centrifugation approach using low ionic strength buffers to isolate PBMC from fresh peripheral blood, cord blood and bone marrow aspirates. This method utilizes differences in density between plasma, PBMC, red blood cells (RBC) and the density gradient medium to isolate relatively pure populations. Technical adaptations and additions to the basic protocol can be implemented to suit downstream applications and processes.



Cell Isolation and Enrichment Services

Clinical workflows often require sample preparation to isolate or to enrich for particular cell populations. At REPROCELL, we can facilitate these workflows with our cell isolation and enrichment service.

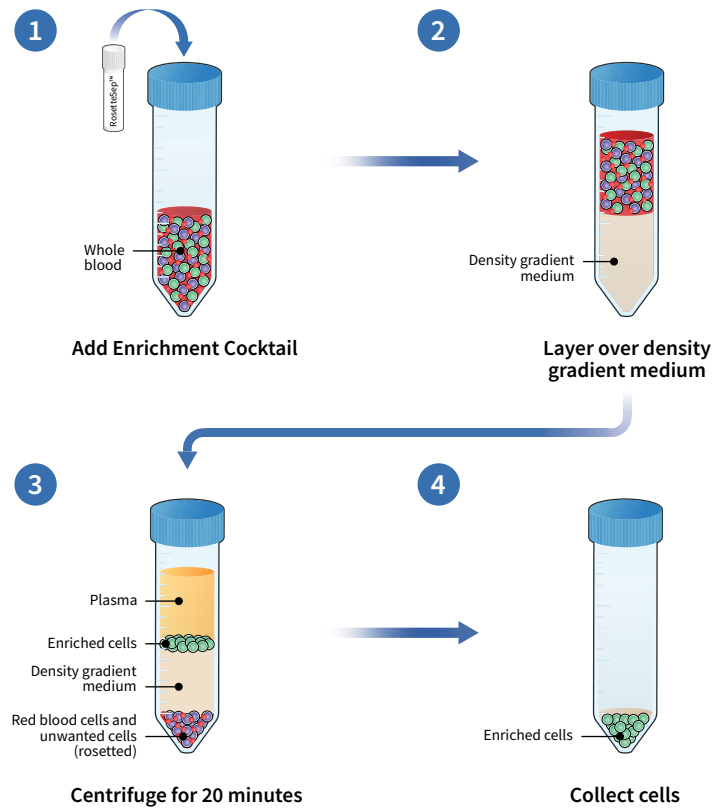
Magnetic Cell Isolation

Our magnetic bead-based approaches are applied to heterogeneous cell populations to isolate immune cell subtypes e.g. T cells, B cells, NK cells, monocytes and macrophages.

Non-Magnetic Cell Isolation

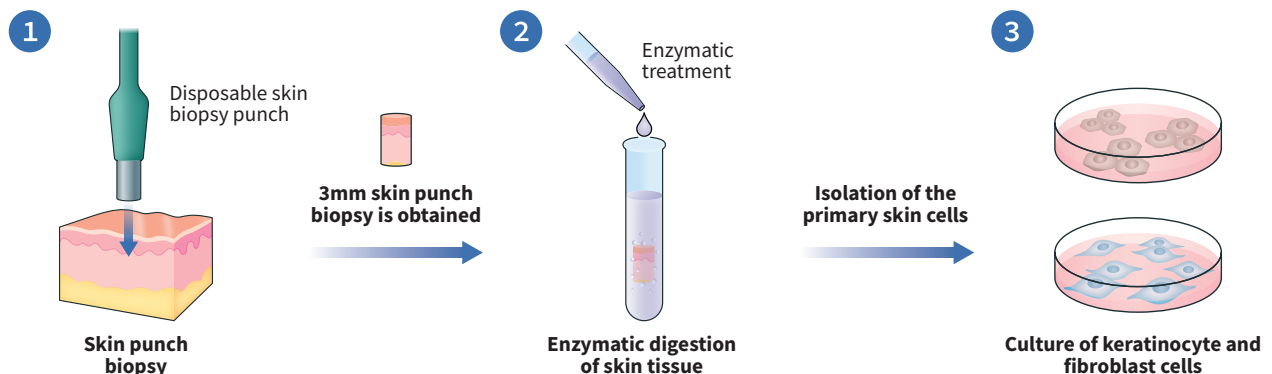
Our immunodensity approach is applied directly to fresh whole blood to isolate immune cell subsets.

- Negative selection
- Utilises antibody labelling and red blood cell rosetting
- Integrated with density gradient centrifugation protocol



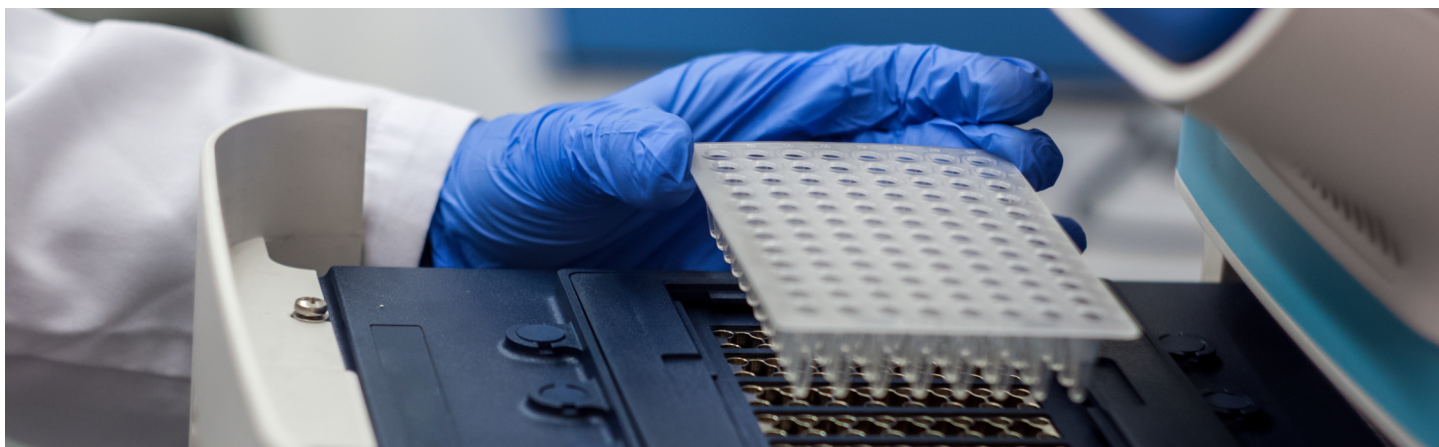
Primary Cell Derivation Services

REPROCELL offers simple, robust methods for the derivation of primary cell populations from a wide range of biospecimens e.g., skin fibroblasts. With over 20 years of experience in clinical sample processing and GCLP facilities that operate 24/7, our scientists can accommodate the most labor-intensive and time-critical clinical projects. Additionally, we offer a variety of optional add-on services post derivation to facilitate your research needs.



Nucleic Acid Extraction

For over 25 years REPROCELL has been developing and honing our RNA and DNA extraction services. Whether from whole blood, PBMC or fresh tissue we have a validated protocol ready to use that can generate good yields of high-quality nucleic acid for use in many downstream applications.



REPROCELL Central Laboratory Services

REPROCELL's decades of expertise in fresh human tissue research provides the foundation for our global clinical trial support network. Every stage of the process from kit preparation and distribution, transport logistics, specimen processing and downstream analysis are all handled by our team of experts. To simplify the management and operation of your clinical trial, get in touch with REPROCELL today. Scan the QR code to discover more.

