Bioserve™ Preclinical Genomics

bioserve
A REPROCELL BRAND

A wide range of accurate and cost-effective preclinical molecular services

REPROCELL Bioserve's genomic services complement our global biorepository of human tissue samples. We also offer our services for any project. We specialize in smaller to mid-size projects, providing intensive customer service from assay design to data delivery and discussion with you about your experiment results.

Build Patient Cohorts from our Global Biorepository

REPROCELL's Bioserve Global Repository is the world's largest commercial human tissue bank, providing researchers with access to over 600,000 DNA, RNA, human tissue and serum samples derived from over 120,000 patients collected from four continents.

Bioserve human tissue samples are consistently handled according to validated protocols established by the FDA/NCI guidelines for biomarker research. All samples are fully consented for broad genomic and proteomic use and are ethically collected according to HIPAA regulations and IRB approved protocols.

Bioserve Global Biorepository Blood Based Collections

- Asthma
- Cancer (post-treatment)
- Cancer (pre-treatment)
- Clinically-confirmed Normal Controls
- Congestive Heart Failure
- COPD
- Coronary Artery Disease
- Diabetes
- End-Stage Renal Disease
- Hypertension
- Lipid Disorder
- Lupus
- Metastatic Cancer
- Multiple Sclerosis
- Neurological Diseases
- Obesity
- Osteoarthritis
- Osteoporosis
- Psoriasis
- Rheumatoid Arthritis
- Stroke

Bioserve Fresh Frozen and FFPE Tissue Types

- Adipose
- Adrenal
- Aorta
- Artery
- Bladder
- Blood
- Bone
- Brain
- Breast
- Cartilage
- Cervix
- Colon
- Esophagus
- Fallopian Tube
- Gall Bladder
- Intestine
- Kidney
- Larynx
- Lip
- Liver
- Lung
- Lymph Node
- Mouth
- Muscle
- Nerve
- Omentum
- Ovary
- Pancreas
- Parathyroid
- Parotid
- Penis
- Peritoneum
- Pharynx
- Pituitary
- Prostate
- Rectum
- Salivary Gland
- Serum
- Skeletal Muscle
- Skin
- Small Intestine
- Smooth Muscle
- Soft Tissue
- Spleen
- Stomach
- Submandibular Gland
- Synovium
- Testis
- Thymus
- Thyroid
- Tongue
- Tonsil
- Ureter
- Urethra
- Uterus
- Vagina
- Vein
- Vulva

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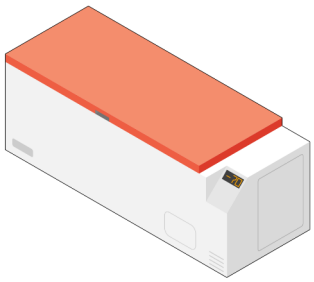
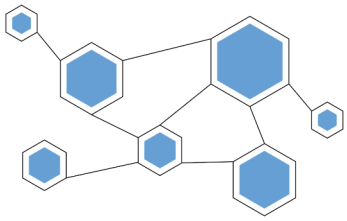


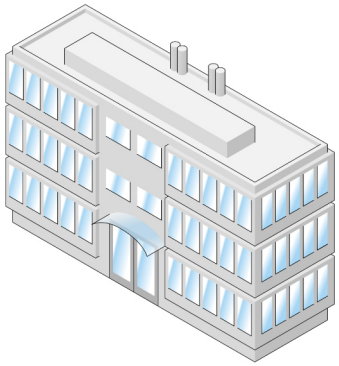
In-House Samples: The Bioserve Global Biorepository

Our Global Bioepository of human tissue samples is one of the largest commercial human tissue banks in the world. With more than 600,000 human serum, DNA, RNA, and FFPE samples, from over 120,000 patients on four continents, there is a good chance that the human DNA samples you need are already stored in the bioepository.



Bioserve Partner Network

The Bioserve Partner Network is a collaboration of leading academic, medical, and industry biospecimen repositories. By uniting Bioserve's market distribution channels with exceptional samples from Bioserve's Global Biorepository and network member inventories, you are ensured of getting the biosamples you need.



Prospective Sample Collections

Through REPROCELL Bioserve's orphan disease network, rare human tissue samples are finally within reach. Bioserve continues to establish procurement partnerships with specialty clinics around the United States in a number of indications/diseases, including Autoimmune, Inflammatory and Rheumatology, Urology and Oncology.

Extract Genomic Information and Discover new Biomarkers with our Molecular Services

REPROCELL Bioserve offers a full range of accurate and cost-effective preclinical molecular services both as a complement to our Global Biorepository and as a stand-alone business to our customers across industry, research, and academic sectors of life sciences.

Our ISO 9001 certified molecular biology lab guarantee customer satisfaction through effective implementation of quality management system, including the continuous improvement of the system and its processes.

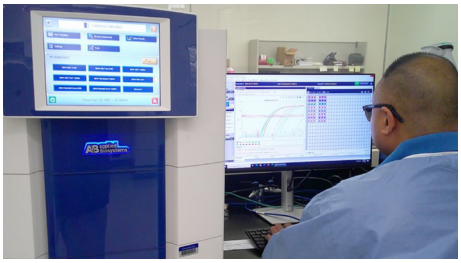
Next-Generation Sequencing (NGS)

REPROCELL USA utilizes Ion Torrent™ NGS sequencing technology, powered by semiconductor chips. This technology helps in implementing a fast and simple workflow that can be adjusted to multiple sequencing applications. The Ion Gene Studio S5 System used by REPROCELL USA provides scalable targeted NGS to support small and large projects.

Genomics Sequencing	Whole genome sequencing
	Whole exome sequencing
	Targeted region sequencing
	Genotyping by sequencing
Epigenomics	Whole genome Bisulphate sequencing
	Me DIP sequencing
	ChIP sequencing

Transcriptomics	Small RNA sequencing
	LncRNA sequencing
	Degradome sequencing
	Transcriptome sequencing
Microbial Genomics	Microbial whole genome sequencing
	Metagenomic shotgun sequencing
	Metatranscriptome sequencing
	16s/18s/ITS amplicon sequencing

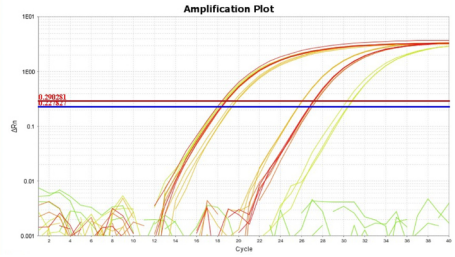
Real-Time PCR (qPCR)



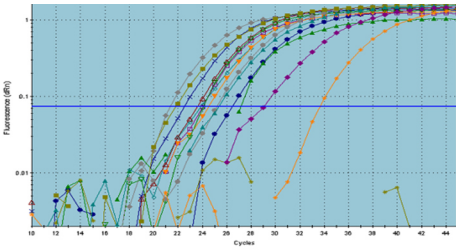
Real-time PCR measures amplification of DNA/RNA at every cycle enabling quantitative measurements during the exponential phase of PCR. REPROCELL utilizes real-time PCR instrument manufactured by Applied BioSystems – the ViiA7™ for various services.

Following are the various services that REPROCELL can provide using real-time PCR:

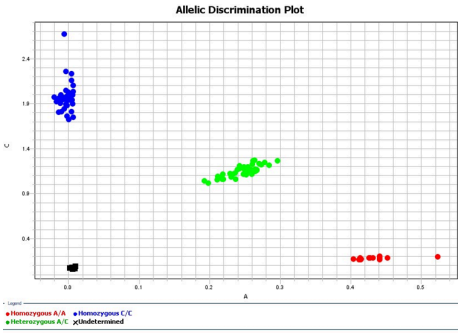
Quantification of DNA/RNA targets	Copy number variations
Single nucleotide polymorphisms (SNPs)	Validation of RNA sequencing data
Mutation detection	MicroRNA (miRNA) analysis
Gene expression analysis	Drug development research
Pathogen detection	Food safety testing



Eexpression analysis of HGPRT gene in lung cancer samples and controls.



Detection of bacteria Helicobacter pylori in gastric cancer samples.



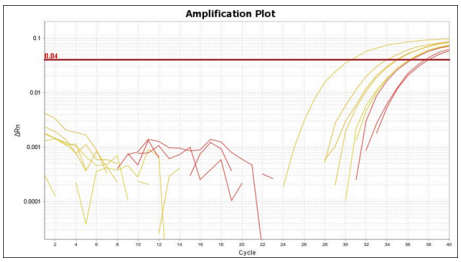
Allelic discrimination plot: homozygous (blue), heterozygous (green), and homozygous AA (red).

Nucleic Acid Extraction

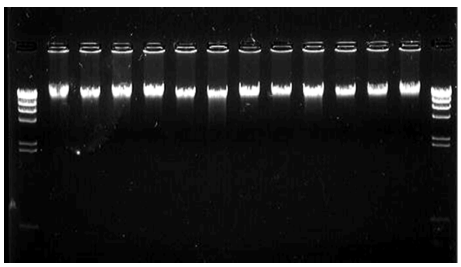
We provide extraction services for both DNA and RNA. We utilize non-organic, organic, and silica-based column methods. Depending on he sample type and the quality and yields of nucleic acids that are required. Sample types from which we have extracted DNA include:

Whole blood	Solid tissues	Feces
Buffy coats	Tissues from FFPE blocks	Nails
Lymphocytes	Saliva	Tissue culture cells
PBMC	Buccal swabs	Tissue culture media
Plasma	Cytobrushes	Leaves
Serum	Nasal scabs	Roots
Blood clots	Hair follicles	
Blood spots	Urine	

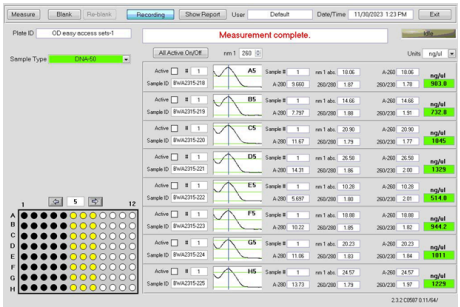
We have been successful in RNA extraction from whole blood, buffy coats, PAXgene tubes, lymphocytes, cultured cells, plant material, cartilage, fresh and frozen tissues and various bacteria.



RT-PCR analysis of ctDNA extracted from plasma of cancer subjects.



DNA extracted from solid tissues electrophoresed on a 1% agarose gel.



Absorbance read-out of DNAs using a Nanodrop UV spectrophotometer

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Biomarker Discovery and Validation

Our in-house expertise in genotyping assay design, oligonucleotide synthesis and SNP validation enable us to deliver accurate data, quickly and cost-effectively. We routinely work with customers to develop customized strategies for particular genotyping projects.

We specialize in smaller to mid-size genotyping projects using Real-Time PCR (RT-PCR), providing extensive customer service from assay design to data delivery and discussing your experiment results.

By partnering with REPROCELL for your genotyping projects, you can expect:

Expert assay design — Choose from our pre-designed panels or have us design a variety of custom assays for your project.

Fast delivery times — Most data are delivered within 5 days of completion of analysis.

Data analysis assistance — Interpret your data easily with our intuitive data reports.

Strict quality control measures — all of our assays are validated in duplicate using 23 pairs of high quality "polymorphism discovery resource" DNA from Coriell. We include up to three of these controls of known genotypes in analysis with customer samples (if plated according to our templates), as well as three negative (no DNA) controls. All control data are provided to the customer at no additional charge.

https://www.reprocell.com/genomic-services