

FREQUENTLY ASKED QUESTIONS:

BioServe Human Biospecimens and Molecular Services



REPROCELL's BioServe* Global Biorepository provides leading academic and industry researchers with access to over 600,000 human DNA, serum and tissue samples linked to detailed clinical and demographic data from 120,000 consented and anonymized patients on four continents.

Our human tissue samples are stocked and readily available. You can check our list of materials or inquire to see if we have specimens that match your requirements. If no stocked material is available, through our network of affiliated hospitals, we can initiate a prospective collection specific for you.

REPROCELL's preclinical services (such as genotyping, and DNA / RNA extraction), also under the BioServe brand, help researchers identify genetic markers, validate drug targets and correlate clinical and molecular data to accelerate the development of new and safer drugs.

Here are some frequently asked questions about REPROCELL's BioServe Services.

Global Human Biospecimen Services

Q1. What Human Tissue Samples can REPROCELL Provide?

REPROCELL's BioServe Global Biorepository is one of the largest sources of human tissue samples in the world. With over 600,000 DNA, tissue, and serum samples, leading researchers from academic institutions and medical research facilities have utilized our tissue bank.

Sampling That's Reliably Sourced

Our human tissue samples are sourced from 120,000 consenting and anonymized patients stemming from four continents. Each tissue profile is culled from detailed clinical and demographic data, which means our tissue bank is cross-referenced and a reliable source for research or medical purposes. We understand the significance of tissue donations to make important discoveries in developing new drugs, diagnosis of disease, and bioresearch.

Preclinical Molecular Services

If you're a pharmaceutical or biotechnology company, let our preclinical molecular services help identify genetic markers, confirm drug targets, and associate clinical and molecular data towards the development of effective, safer drugs.

* Founded by NCI researchers with funding from the University of Maryland TAP, USA, BioServe was incorporated as a business in 1990. Acquired by REPROCELL in 2014 and becoming the headquarters of REPROCELL USA Inc., BioServe continues as a brand of REPROCELL, offering the same preclinical services.

Rare Disease Network

We've also developed an orphan disease network, by collecting rare, human tissue samples that serve speciality clinics around the United States. These rare samples help towards research on a number of diseases, including inflammatory, autoimmune, and rheumatology, urology, and oncology.

We Work With Partners

Let our highly trained staff access our tissue sample network to assist you with finding the right human tissue samples for your project. We maintain fellowship with several other leading biorepositories to ensure you always get what you need.

Unparalleled Service

Quality and professionalism is what we strive for at REPROCELL. Not only do we thoroughly screen, hire, and train all personnel, our quality assurance program is detailed, comprehensive, and continually monitored for improvement. We provide the infrastructure and the necessary support to researchers, which include the transfer of tissue samples to any organization. Rest assured that we abide by all ethical, safety, and material transfer regulations at our repository.

REPROCELL provides unrivaled access to clinical-grade IRB-approved human samples. We've developed our large bank of tissue samples for 17 years and continue to develop methods to support the research and medical industries towards finding solutions.

Contact REPROCELL if you have a question about our services, want assistance in finding human tissue samples, or have another inquiry.

Q2. How does REPROCELL (BioServe) Choose its Biospecimens?

Thanks to the mapping of the human genome and the growth of genetic science over the past few decades, the powers and possibility of medical science is quickly expanding. DNA extraction has made it possible to develop new drugs, and has given us new sources of important drugs like insulin.

It's also made the study, diagnosis, treatment, and even prevention of rare and life-threatening genetic diseases possible. With the help of international collaboration in the biomedical sciences, BioServe has amassed the world's largest database of human DNA and tissue samples. We choose our human biospecimens with the needs of medical scientists in mind, whether they're involved in industry or academic research.

REPROCELL's BioServe Global BioRepository contains more than 600,000 human biospecimens including samples of tissue, DNA, RNA, and serum. These specimens come from 120,000 patients on four continents, making our specimen repository the world's most complete. It's our goal to make sure that no matter what kind of sample a given researcher needs, we have it.

We use three criteria to ensure that our samples are of the highest quality and that using our samples is the simplest and easiest part of your organization's research and development process. First, we seek a level of access to clinical-grade human biospecimens that cannot be matched by any other bioservices company.

Second, we are committed to a data-rich biomaterial collection model, which means we seek out the samples that are most valuable for research. Then we include preclinical markers that help researchers to pinpoint genetic markers necessary for the development of drug targets and the collection of clinical data.

Third, we make the collection of IRB-approved human samples a top priority. That means you can have faith that the samples we provide will be suitable for your research and development or academic study needs, no matter what they are. We believe that procuring quality human biospecimens from us should be the easiest part of the process!

Until very recently, researchers were often at a loss to find samples for the study of very rare “orphan diseases,” and as a result, development of effective treatment for these conditions was stymied. But thanks to our efforts and partnership with clinics around the USA, we now offer a growing range of rare samples for researchers interested in studying the rarest genetic diseases.

Q3. How Can REPROCELL’s BioServe Human Biospecimens Help Me with My Research?

Human biospecimens include tissue, plasma, urine, and blood collected from patients, often during the treatment process. These patients give their consent for researchers to use their biospecimens to develop new treatments that may help other patients in the future. The specimens are stored in biorepositories, like REPROCELL’s BioServe Global Biorepository, which contains more than 600,000 human biospecimens.

Our biorepository is one of the largest in the world. It contains tissue and serum samples from more than 120,000 consenting, anonymous patients from four different continents. That’s what makes it invaluable to your research.

Researchers from the National Cancer Institute used funds from the University of Maryland Technology Advancement Program (TAP) to found BioServe in 1989 (acquired by REPROCELL in 2014). We now have more than 25 years of experience collecting and human biospecimens. Our in-house library of human samples provides a level of access to human tissue samples that no other biorepository can offer. No matter what samples you need for your research, REPROCELL probably has them.

But that’s not all. REPROCELL’s BioServe Biospecimen Network also brings together many other top biorepositories in the industry, to give you the widest possible access to all the samples you need.

Even now, we are working with specialty clinics throughout the United States to give researchers expanded access to a library of rare human samples for the study of orphan diseases. These rare diseases include the familiar — Lou Gehrig’s disease and cystic fibrosis — as well as less well-known conditions like acromegaly and Job syndrome. If you’re researching rare diseases, REPROCELL can unlock a wealth of samples you won’t find anywhere else.

The use of human biospecimens has already proven vital in the development of powerful new pharmaceuticals. Thanks to the preclinical molecular services we offer, you and your team will be better able to identify important genetic markers, correlate clinical and molecular data, and verify drug targets. Our sample repository can help you develop new and better drugs and treatments, faster.

Don’t take our word for it; we already serve many major pharmaceutical companies, Ivy League universities, government research institutions like the NIH, and other top industry and academic research institutions.

Contact REPROCELL today and learn more about how our biosamples can further your research goals.

Q4. Why choose BioServe Human Biospecimens for my research?

Scientific advances do not happen without tapping into resources such as human biospecimens, and at REPROCELL, our extensive BioServe Global Biorepository of human biospecimens can support your research. Our

repository collects, processes, stores, and distributes human biospecimens from a number of academic, medical, or industry institutions.

Uniting Our Channels

By uniting our channels, including academic, medical, or industry players, our superior global biorepository has produced an extensive inventory, so you will always receive the biosamples needed for your project. We support the future of scientific investigation and our biorepository contains more than 600,000 samples. Every Network member has contributed valuable samples to REPROCELL.

We Provide High Quality

Research utilizing biosamples is crucial to understanding disease and developing therapies. Up until now, there were not enough quality, quantity, and types of human biospecimens available to researchers. Our response to this absence is REPROCELL's BioServe Biospecimen Network. We created a sole source of high-quality biosamples. We practice transparency, providing information to our clients on where and how we source our samples. Specimens are acquired through IRB-approved protocols, and HIPAA-compliant parameters. REPROCELL ensures you receive the highest-quality samples gathered with the gold standard SOPs.

Sample Cataloging in One Repository

REPROCELL's single industrial source of human biospecimens makes us one of the most trusted and largest in the world. As an example, our samples covers 600,000 human DNA, serum, and tissue samples linked to comprehensive clinical and demographic from 120,000 consented and anonymous patients from several corners of the globe.

Superior Service

It is easy to reach out to us: Simply submit a "sample request" on our website. We will search the in-house inventory and the large network catalog to locate the samples you have chosen. Because of the diverse nature of our network, sometimes your order will be fulfilled by a combination of the two. Our goal is to fulfill your sample request, so there is no need to search elsewhere.

At REPROCELL, our biorepository is one of the largest sources for human biospecimens for medical research or bioprojects. Place your sample request today. If you have another inquiry about our services, we would be happy to answer any questions.

Genotyping Services

Q5. What genotyping services does REPROCELL offer?

Is your research facility about to launch a genotyping project? REPROCELL's state-of-the-art genotyping services are here to provide support and resources. When you are launching a new project to genotype organisms or microorganisms, there are several factors to consider.

Comprehensive Assay Design

At REPROCELL, one of our services is helping you design an assay. We can customize an assay design for your needs, to ensure the assay procedure garners the results you're seeking — that means qualitatively or quantitatively measuring the amount or functional activity of the DNA samples.

Data Analysis

Another branch of our genotyping services is assisting with the analysis of data. Our intuitive data reports provide results in a readable manner, laid out simply for you.

Delivery

Tight scheduling on your genotyping project can be stressful, but a professional genotyping service should be able to deliver on time, when you need it. We've completed the basic task of on-schedule delivery with hundreds of facilities and researchers, which may seem simple, but we realize is paramount to your project.

Quality Control Measures

Our genotyping services provide assays that are validated in duplicate using 23 pairs of superior "Polymorphism Discovery Resource" DNA from Coriell. The Coriell Institute for Medical Research is a trusted facility that promotes innovative advances in pre-clinical discoveries, and they support important research around the globe. We also include up to three controls of known genotypes, if the customer samples were plated according to our templates, along with three negative controls that contain no DNA. All control data is provided at no additional charge, to you.

Cutting-Edge Technology

REPROCELL only uses the most current technology to produce reliable results from our genotyping services. Our in-house scientists utilize Sequenom™, a very recent development in genotyping. The sample preparation, called iPlex, enables increased multiplexing capability, high rates of accuracy and call rates, with increased sample throughput. A secondary technology we use is the real-time instrument, the ViiA7 Real-Time PCR System. This platform is seamless, integrating a variety of quantitative PCR and genotyping applications for your project parameters.

Contact REPROCELL for genotyping services, as well as human tissue samples and preclinical molecular services. We've partnered with some of the top research, medical, and learning institutions across the country. If you have a question about our services or want assistance in sourcing samples, contact us today and we'll be happy to jumpstart your project.

Q6. What technologies does REPROCELL use for its genotyping services?

When your organization needs experienced assistance with genotyping services, REPROCELL can help. Our vast Global Repository unlocks the secrets of more than 600,000 human DNA and tissue samples, from 120,000 patients around the world. Our molecular services use some of the latest technology to assist with industry and academic research in the medical, pharmaceutical, and biotechnological fields.

Genotyping is just one of the molecular services we provide. It all begins with our expert assay design. We offer a number of pre-designed assay panels, or you can have our scientists custom-design an assay panel to meet your needs. With our expert assay design, our genotyping services can give you the meaningful results you need.

The specific technology necessary to meet your project's needs depends on its parameters. After assessing your project's requirements, our scientists will use either the ViiA 7 Real-Time PCR System or the Sequenom MassARRAY MALDI-TOF Analyzer 4.

The ViiA 7 Real-Time PCR System is a seventh-generation platform that combines high-performance features like an easy, modern touch-screen user interface and compatibility with automation systems to make the most of automated environments. With its user-friendly software, capacity for detailed analysis, and award-winning support, the ViiA 7 is the PCR system of choice for most labs.

The ViiA 7 system is among the most advanced and innovative high-productivity PCR systems. Its OptiFlex system allows a greater degree of accuracy and sensitivity than any other system available. The ViiA 7's precision allows us to pinpoint changes as small as 1.5 fold in singleplex reactions. The ViiA 7 works with 96 and fast 96-well plates, 384-well plates, and TaqMan Array Cards.

If the ViiA 7 system does not meet your needs, we will use the MassARRAY MALDI-TOF. This mass spectrometry technology has been specially designed for genomic research. It can run two 384-well and 96-well plates at once, for a capacity of more than 100,000 genotypes from thousands of samples each day.

The MassARRAY MALDI-TOF offers extremely high resolution and high throughput. This technology can measure absolute concentration with greater precision than any other method. It's used for virtually all types of nucleic acid analysis, including SNP genotyping services. The MassARRAY system is a popular choice for linkage studies, fine mapping, and routine genetic testing.

DNA and RNA Extraction Services

Q7. Experienced DNA Extraction Services

If you're a scientist working in the medical field, you know how important good DNA extraction can be. That's because you know that DNA extraction is a crucial early step in a range of diagnostic procedures, and can be vital to the diagnosis of genetic disorders as well as other diseases. DNA can be extracted from all kinds of biomaterials, including blood clots or whole blood, saliva, swabs, and fresh or frozen tissue.

DNA and RNA extraction are among the newest of the biosciences, because the technology necessary for the extraction of DNA from plants and animals was developed only recently. In the medical field, DNA extraction often leads to the development of new pharmaceuticals. Human and animal DNA is used to make a number of important and life-saving drugs, including insulin.

Medical Applications

The medical applications of DNA extraction extend beyond pharmaceutical development. DNA extraction services can help with the diagnosis of a number of genetic conditions. It's only when these conditions are diagnosed that appropriate treatment can begin.

These conditions include cystic fibrosis, Huntington's disease, hemophilia, Tay-Sach's disease, sickle-cell anemia, and fragile X syndrome. Even if the patient isn't exhibiting symptoms of a genetic illness, they could be a carrier and could put their future children at risk. DNA extraction and testing can warn carriers of the potential for genetic illness.

Our Superior Process

DNA can be extracted from any living thing, but in order for that DNA to be useful, it must be extracted properly. Here at BioServe, we've been extracting DNA from biomaterials of all types for more than 20 years. We've worked with saliva, whole blood, buffy coats, blood clots, mouthwash, nuclear pellets, PMBCs, serum, buccal swabs, cytobrushes, cultured cells, and plant material, as well as fresh, frozen, and paraffin-embedded tissues.

We understand that different biomaterials require different DNA extraction processes and reagents. That's why we've developed our own line of DNAQuik reagents to extract high-quality DNA. It's what makes us one of the best DNA extraction services in the field. But DNA extraction is too important to trust to just anyone — lives hang in the balance.

Trust REPROCELL when you need DNA and RNA extraction services and get the great results your patients need.

Q8. Why choose REPROCELL's DNA and RNA extraction services?

Only a trusted professional and standardized facility is suitable for proper DNA extraction services. BioServe's extensive history and experienced staff has advantages over other facilities.

Our Proven History

We have gathered 20 years of solid experience with biomaterials. From serum, whole blood, saliva, cultured cells, fresh and frozen tissues, plus much more, our methods to genomic DNA isolation is meticulous and careful.

Variety of Reagents

Trust us to utilize various reagents based on the specific biomaterials being analyzed. We use a variety of organic and non-organic reagents to isolate viable DNA. One we have developed is called DNAQuik™. This non-organic reagent produces quality, high molecular genomic DNA. We utilize DNAQuik for DNA extractions with a number of tissues.

Proven Quantitative Methods

REPROCELL's quantitative methods are high-grade and reliable. We quantitate Genomic DNA by measuring with an optical density at 260 nm and A280 nm wavelengths. For small samples that yield small quantities of DNA or bacterial DNA, our team uses the Real-Time PCR, setting the probe for specific human DNA. Quantitation is also possible with Picogreen, should your project demand it.

Quality Measurements

Our laboratory determines the quality of DNA by electrophoresing a small quantity from the larger sample (usually 25 ng to 200 ng) on 1 percent agarose gel. We usually perform quality checks on 10 percent of the samples. We handpick some DNA samples and analyze them for 15 years; if it's determined they are high quality, we place them in storage at -70°C.

Our Results Matter

We are proud that our DNA extraction services are used in many genomics applications. Masscode (Qiagenomics), Beadchip Array (Illumina), GeneChip Array (Affymetrix), and TaqMan (ABI), are a few examples where we make an impact on molecular biology.

RNA Extraction

Not only do we excel at DNA extraction services, our RNA extraction procedures are no different. By utilizing proven reagents such as Qiagen and RNAQuik™, we hold to the highest standards of measuring RNA quality with the Agilent's Bioanalyzer, an industry standard instrument. Time and again, our lab technicians continue to produce protocols for RNA purification.

At REPROCELL, we provide unparalleled genotyping, human tissue samples, and DNA extraction services. Do you have an inquiry about our services? Contact us today and we will be happy to answer.