

EXOSOME BIOMARKER SERVICES

SPEED UP YOUR SCIENCE WITH SBI'S HIGH-QUALITY CUSTOM SERVICES

SYSTEMBIO.COM/EXOSOME-SERVICES

HIGHLIGHTS

- **Expand your biomarker discovery and profiling studies without expanding your lab**
- **Leverage our expertise in exosome isolation from low input sample volumes**
- **Accomplish more with our fast turn-around times and end-to-end services**
- **Enjoy consistent quality, confidentiality, and on-time delivery with all projects completed on-site in our Palo Alto, CA, facility**

"I was extremely satisfied with the exosomal RNA-Seq service provided by System Biosciences.

The turnaround was fast (at the low end of the estimate) and I got 15-25 million high quality aligned reads per sample"

*—Katja Koeppen, Ph.D.,
Geisel School of Medicine, Dartmouth*



System Biosciences
Harnessing innovation to drive discoveries

Comprehensive, end-to-end exosomal biomarker services

For both basic and translational researchers, exosomes represent a rich source of easily-isolated miRNA, protein, lipid, and metabolite biomarkers. Carrying molecules derived from their parent cell, exosomes can report on cellular physiology and play an important role in normal and disease processes¹. However, some labs might not have the time, resources, or in-house expertise needed to quickly capitalize on this growing field. For these labs, SBI offers a comprehensive set of end-to-end exosome research services—simply send us your biofluid and we'll take care of the rest.

The first company to sell exosome isolation reagents, the team at SBI has been working with exosomes since 2010. Trust your exosome projects to the experts at SBI.

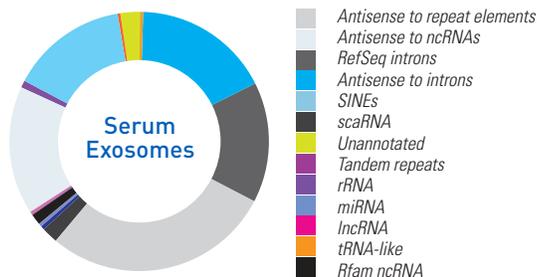
Quickly and easily profile exosomal RNA with our ExoNGS Service

With low input sample requirements (Table 1, back page) and competitive turn-around times of 6 - 10 weeks, SBI's ExoNGS Service simplifies your exosomal RNA profiling studies. Our services team has prepared hundreds of high-quality small RNA libraries—we focus on RNAs between 20 and 150 bp in size—that provide 10-15 million raw reads/sample at an average read length of 75 bp on an Illumina NextSeq 500 Sequencer. In addition, our scientists are ready to answer your technical or project management questions, and can provide recommendations on protocols, data analysis, and more.

The ExoNGS Workflow

-  Send us your sample
-  We isolate exosomes
-  Purify small RNAs
-  Build and QC the library
-  Perform NGS
-  QC the reads
-  Deliver data

Sample data



Profile exosomal proteins with our mass spec services

Just as with SBI's ExoNGS service, our mass spec proteomics service requires low input sample volumes (Table 1). We can isolate exosomes from most biofluids, but can also work with your own exosome preparations. However, we recommend using our proven sample preparation approaches, which typically deliver cleaner peptide libraries with lower amounts of carryover protein, for more reliable exosome proteomics data. With fast turn-around times of approximately 4 weeks, SBI's Proteomics Mass Spec service is a great choice for biomarker studies.

Proteomics service highlights:

- Libraries prepared using standard trypsin cleavage for MASCOT compatibility
- Data file compatibility with Scaffold viewer simplifies data mining and analysis

Data deliverables:

- Raw MS spectra data
- Pre-analyzed data, Scaffold format
- Excel file with proteins identified and quantified

Building the tools that speed your research

With an eye on the latest advances, SBI finds promising technology and converts it into easy-to-use tools and robust services. Our growing Exosome Services offerings are just one example. See what other ways SBI can drive your research forward—visit us at systembio.com.

Table 1. Required sample volumes

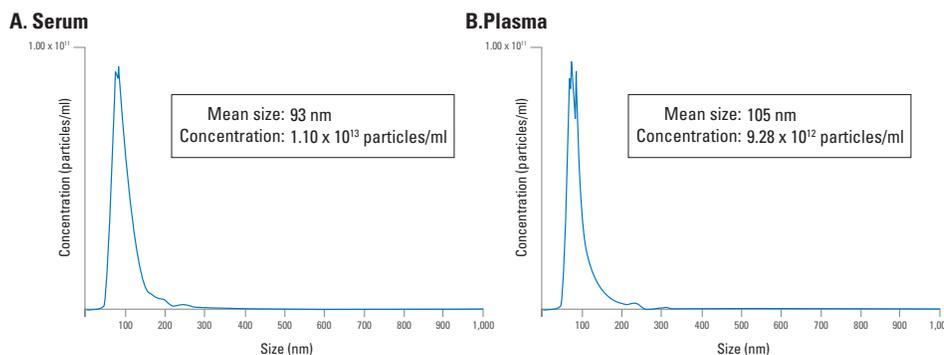
| Volume | Biofluid |
|------------|------------------------------|
| 0.5 - 1 ml | Serum, plasma, ascites fluid |
| 5 - 10 ml | Cell media, urine, CSF |
| Inquire | Other |

Looking for more than proteins? Try SBI's Lipidomics/Metabolomics Services—see the brochure or visit systembio.com/lipidomics

Characterize exosome preps with NanoSight analysis

Get a clearer picture of the quality of your exosomes with SBI's NanoSight Analysis Service. Send us your biofluid or prepared exosomes, and we'll send back a report with the particle analysis data which includes the mean and mode diameter size as well as particle concentration. Fast and efficient—turn-around time is approximately 2 weeks—SBI's NanoSight Analysis Service is an excellent way to characterize your exosome preps.

Sample NanoSight NTA data



Data shown is for extracellular vesicles isolated from 500 μ l of serum (A) and plasma (B).

Get more information about any of our Exosome Services or request a custom scientific consultation about your project—email services@systembio.com

References

1. Rashed, MH, et al. Exosomes: From Garbage Bins to Promising Therapeutic Targets. *Int. J. Mol. Sci.* 2017; **18**(3):538. PMID: 28257101.