EXOSOME RESEARCH

SmartSEC™ HT EV Isolation System for Serum & Plasma

96-WELL PLATE-BASED EV ISOLATION

SYSTEMBIO.COM/SMARTSEC-HT

HIGHLIGHTS

- *Powerful—accelerate EV biomarker, diagnostics, and therapeutics R&D with high-throughput, 96-well plate-based EV isolation*
- *Fast—isolate EVs from as many as 96 samples in less than one hour*
- *Flexible—use all the wells in a single run or run a partial plate and save wells for later studies*
- *Easy to use—load serum or plasma directly onto the SmartSEC HT plate after a brief centrifugation—no need to pre-treat plasma!*
- *High performance—achieve levels of purity and yield better than ultracentrifugation*
- *Versatile—isolated EVs are compatible with most downstream applications*

Overcome throughput barriers in extracellular vesicle research

While extracellular vesicles (EVs) hold a lot of promise for diagnostic and therapeutic use, research and development has been hampered by the lack of a robust, high-throughput isolation method that would facilitate simultaneous collection/comparison of EVs from multiple sources. To overcome this challenge, SBI developed the SmartSEC HT EV Isolation System for Serum & Plasma, the first kit on the market that enables EV isolation in a 96-well plate-based format. With SmartSEC HT, you get high yields of highly pure EVs with the high-throughputs needed for biomarker discovery, diagnostic development, therapeutic development, and more.

The SmartSEC HT EV Isolation System is a proprietary chromatography-based EV isolation method that combines all the benefits of size exclusion chromatography (SEC)—purity, yield, reproducibility, and preservation of EV integrity—with a contaminant trapping feature that overcomes the limitations of conventional SEC. The result is a fast, easy, and high-throughput EV isolation workflow (**Figure 1**) where the majority of EVs elute in the first two fractions.

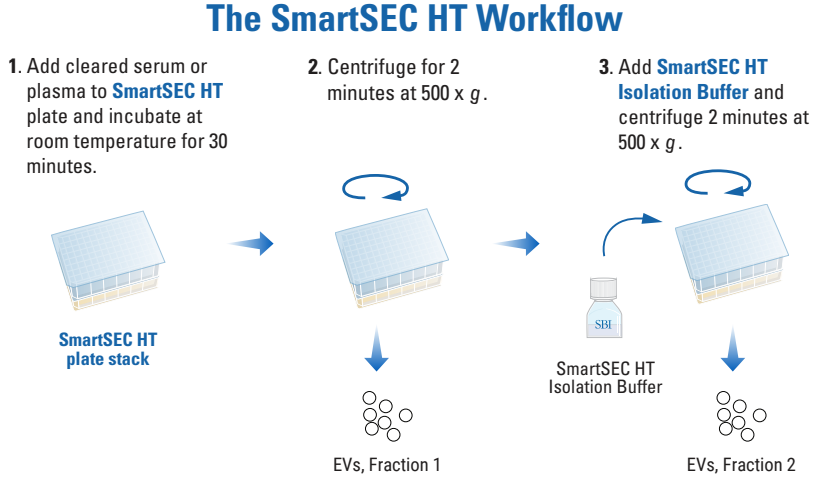

Figure 1. High-throughput EV isolation with SmartSEC HT is quick and easy.

Each SmartSEC HT kit comes with optimized amounts of SmartSEC resin already aliquoted into a 96-well filter plate, SmartSEC Isolation Buffer, and 2 collection plates. Each well of the filter plate can be loaded with 250 – 500 µL of serum or plasma and, if desired, unused wells can be preserved for future use. The entire SmartSEC HT System is compatible with standard manual and automated liquid handling systems.

SBI
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Harnessing innovation to drive discoveries

See the purity and yields achievable with SmartSEC HT

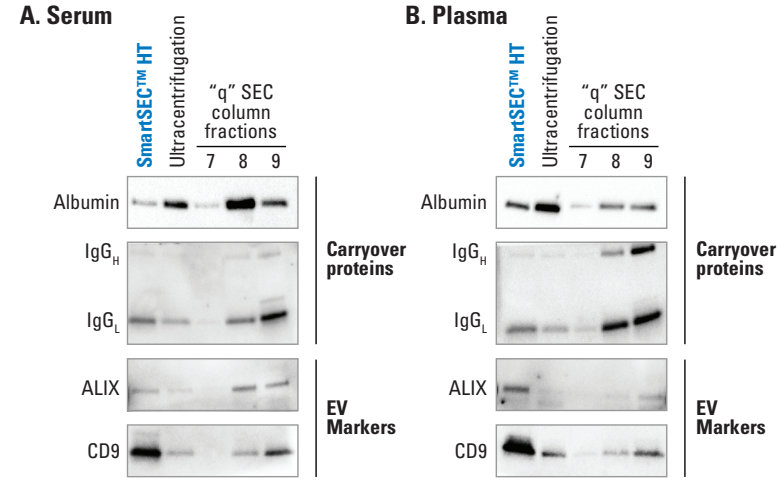

Figure 2. SmartSEC HT delivers high yields of EVs with low amounts of undesirable carry-over protein. *EVs were prepared from 500 µL of serum (A) or plasma (B) using the indicated methods. For Western blot analysis, 1 µg protein equivalent from the first fraction was loaded into each lane.*

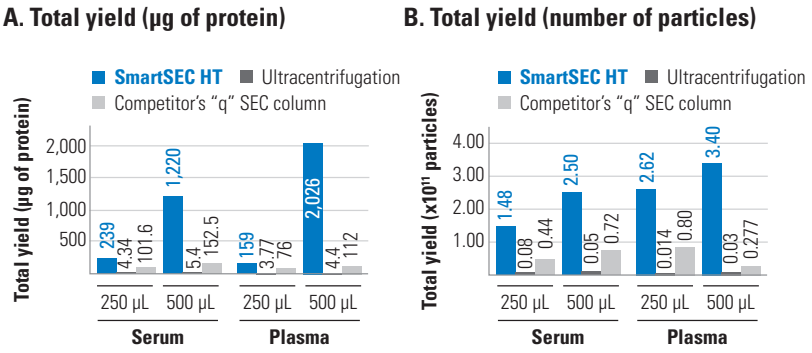

Figure 3. SmartSEC HT delivers higher yields than ultracentrifugation and a competitor's "q" SEC column. *We prepared EVs from 250 µL and 500 µL of serum and plasma using the indicated methods and determined yield using (A) a Qubit protein assay and (B) fluorescent nanoparticle tracking analysis (fNTA). By both EV yield methods, SmartSEC HT outperforms the other methods.*

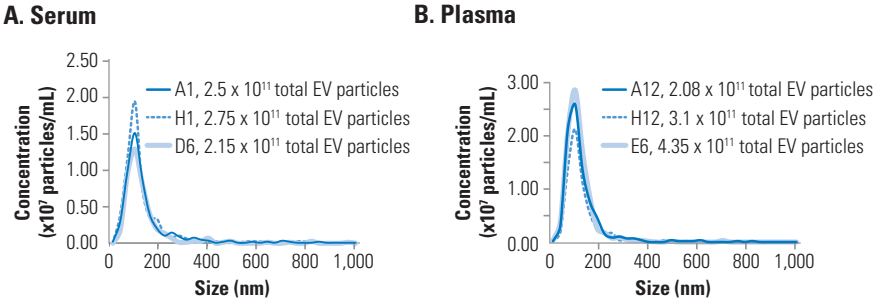

Figure 4. The SmartSEC HT plate delivers highly consistent EV isolation across the plate. *We loaded 500 µL of serum (A) and plasma (B) into different wells, isolated EVs and analyzed by fNTA. For both serum and plasma samples, the total number of EV particles and the particle size distribution was highly reproducible from well-to-well.*

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 accessible to any researcher. Our growing exosome product portfolio is just one example. See what other ways SBI can drive your research forward—visit us at ***systembio.com****.*

See more data and order SmartSEC HT by visiting ***systembio.com/SmartSEC-HT***

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