

Sample-prep-free extracellular vesicle isolation in biological samples

Efficient quantification and isolation of extracellular vesicles with a fast and sensitive dip-in assay

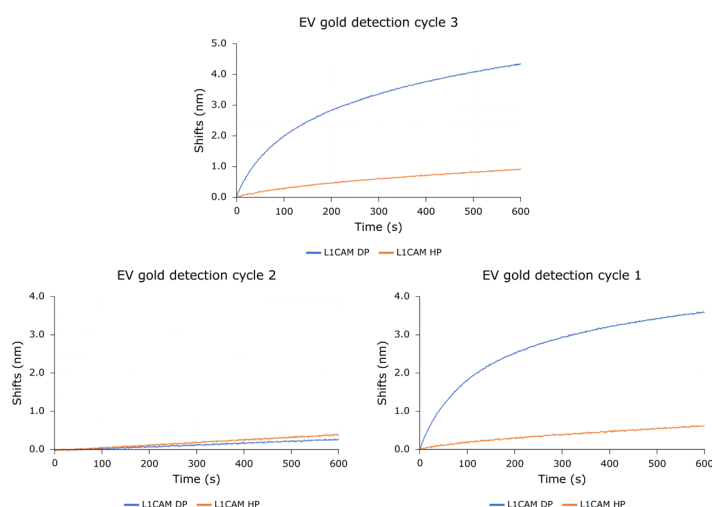
WHITE FOX can directly isolate tissue marker-specific extracellular vesicles (EVs) from minimal quantities of blood plasma with no prior sample preparation, saving time and streamlining disease studies.

For instance, WHITE FOX can enrich neuronal-specific extracellular vesicles from the plasma of Alzheimer's disease patients through immune-affinity capture and release with an immobilized anti-L1CAM capture antibody.

Highlights

- **Anti-L1CAM antibody used in capture, release, recapture cycles to isolate and enrich specific EVs.**
- **Maximize precious samples.**
No loss from sample prep.
High EV yield from minimal volumes.
- **Cost-efficient.**
Reuse the same probe for multiple isolation cycles.
- **Simple and quick EV isolation.**
No microfluidics, clogging, or ultracentrifugation.
- **Highly sensitive and specific.**
Neuron-specific EVs detected in healthy and disease plasma.
- **Real-time insights.**

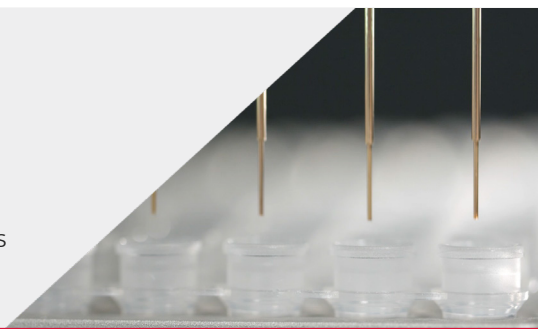
EV capture, release, recapture cycles

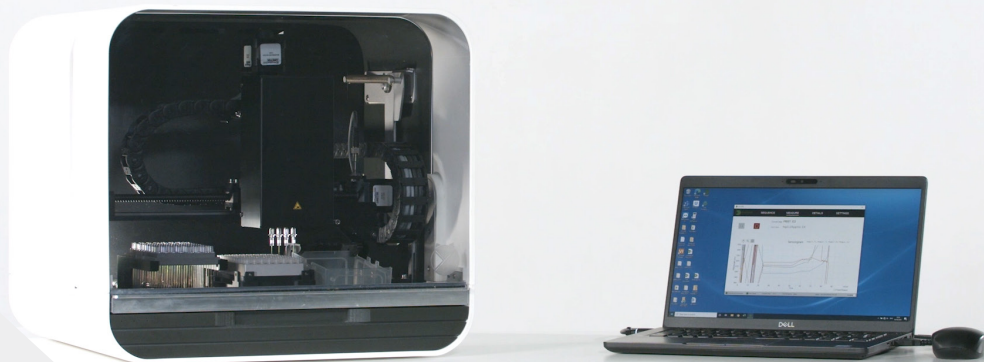


EV capture (a), release (b), and recapture (c) from Alzheimer's disease patient plasma (L1CAM DP) and healthy plasma (L1CAM HP) with anti-L1CAM as capture antibody.

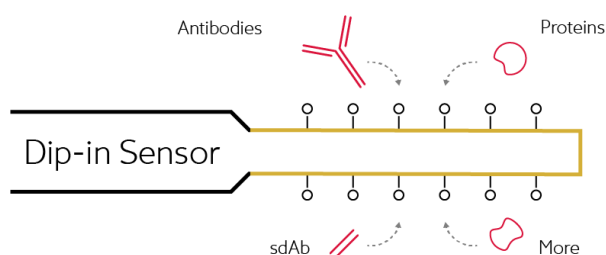
Conclusion

WHITE FOX is an easy-to-use, rapid, and cost-effective tool to isolate and enrich disease-associated EVs directly in low volumes of complex patient biofluids. The yield of isolated EVs can be scaled to match the downstream application, providing the flexibility and efficiency to perform streamlined EV-focused studies with ease.





FOx BIOSYSTEMS has developed a convenient dip-in probe configuration to study interactions between biomolecules. WHITE FOx can accurately quantify biomolecules and measure their kinetic interactions directly in complex media, something that traditional fluidics-based systems struggle to do without extensive sample processing.



The advantages of WHITE FOx:

- **Fast:** sample to result in as little as 10 minutes.*
- **Direct detection:** no prior purification of EVs necessary, even in complex biofluids.
- **Accurate:** highly comparable results with ELISA, the current routine method.
- **Relevant concentration range:** quantification at biologically relevant concentrations.
- **No fluidics.**
 - Minimal sample processing.
 - Greatly reduced cross-contamination.
- **Flexible:** sensor probes available with common surface chemistries to bind a variety of biologicals.

*when using pre-functionalized probes

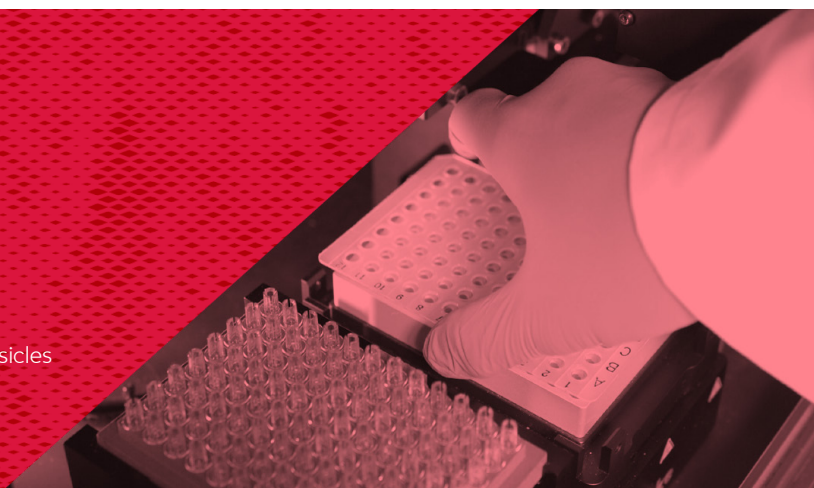


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For more details, read our white paper
 "Isolation of neuron-specific extracellular vesicles
 from human plasma using FO-SPR."



WHITE FOx is for research use only, not for diagnostic purposes.