Flow Cytometry in Extracellular Vesicle Analysis.

Article collection.

Extracellular vesicles (EVs) are small, membrane-bound particles that are secreted by cells and play important roles in intercellular communication. They carry unique surface markers, proteins, and nucleic acids that reflect the origin and state of the cells they were secreted from.

Flow cytometry is a powerful tool for analyzing EVs

It can measure the size, concentration, and surface markers of individual particles in a heterogeneous sample. It can also help identify and quantify EV subpopulations that are associated with disease, which can aid in early detection, diagnosis, and monitoring of disease progression.

In our latest article collection, we've gathered papers that illustrate the role of flow cytometry in the evaluation of extracellular vesicles in fundamental research, biomarkers, and cellular therapy products.

Here's a taster of what you'll find:

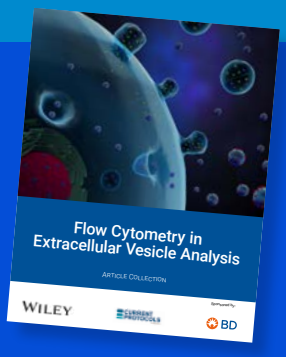
A brief history of nearly EV-erything – The rise and rise of extracellular vesicles.
Couch et al. (2021)

Centrifugation Affects the Purity of Liquid Biopsy-Based Tumor Biomarkers.
Rikkert et al. (2018)

MIFlowCyt-EV: The Next Chapter in the Reporting and Reliability of Single Extracellular Vesicle Flow Cytometry Experiments.
Welsh et al. (2021)

Interested in learning more?

Download the article collection to see how accurate and consistent evaluation of EVs is crucial for the effectiveness of cellular therapies.



Download now

Flow Cytometry in Extracellular Vesicle Analysis.

Article collection.

Extracellular vesicles (EVs) are small, membrane-bound particles that are secreted by cells and play important roles in intercellular communication. They carry unique surface markers, proteins, and nucleic acids that reflect the origin and state of the cells they were secreted from.

Flow cytometry is a powerful tool for analyzing EVs

It can measure the size, concentration, and surface markers of individual particles in a heterogeneous sample. It can also help identify and quantify EV subpopulations that are associated with disease, which can aid in early detection, diagnosis, and monitoring of disease progression.

In our latest article collection, we've gathered papers that illustrate the role of flow cytometry in the evaluation of extracellular vesicles in fundamental research, biomarkers, and cellular therapy products.

Here's a taster of what you'll find:

A brief history of nearly EV-erything – The rise and rise of extracellular vesicles.

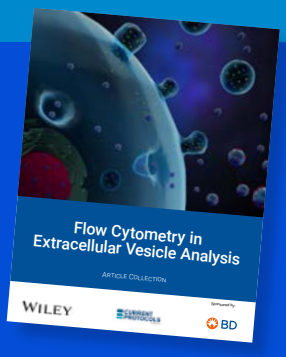
Couch et al. (2021)

As we approach the 75th anniversary of the experiments in which EVs were first (unknowingly) isolated, the authors of this article:

- **Highlight the use of flow cytometry** as a powerful tool for analyzing EVs
- Emphasize the importance of **standardization in both EV isolation and EV experimental** approaches
- Underscore the importance of **accurate and consistent evaluation of EVs** for the effectiveness of cellular therapies
- Examine the overall importance of EV flow cytometry as a **valuable technique for studying the biology of EVs**

Interested in learning more?

Download the article collection to see how accurate and consistent evaluation of EVs is crucial for the effectiveness of cellular therapies.



Download now

Flow Cytometry in Extracellular Vesicle Analysis.

Article collection.

Extracellular vesicles (EVs) are small, membrane-bound particles that are secreted by cells and play important roles in intercellular communication. They carry unique surface markers, proteins, and nucleic acids that reflect the origin and state of the cells they were secreted from.

Flow cytometry is a powerful tool for analyzing EVs

It can measure the size, concentration, and surface markers of individual particles in a heterogeneous sample. It can also help identify and quantify EV subpopulations that are associated with disease, which can aid in early detection, diagnosis, and monitoring of disease progression.

In our latest article collection, we've gathered papers that illustrate the role of flow cytometry in the evaluation of extracellular vesicles in fundamental research, biomarkers, and cellular therapy products.

Here's a taster of what you'll find:

A brief history of nearly EV-erything – The rise and rise of extracellular vesicles.

Couch et al. (2021)

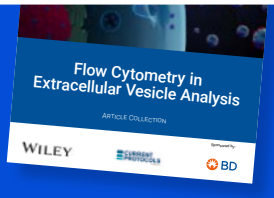
Centrifugation Affects the Purity of Liquid Biopsy-Based Tumor Biomarkers.

Rikkert et al. (2018)

In this piece, the authors demonstrate how flow cytometry enhances EV research and supports the development of innovative diagnostic and therapeutic approaches. The authors:

- Highlight the use of **flow cytometry in EV based biomarker research** and demonstrate EV isolation methods
- Consider **various protocols to isolate EVs with different characteristics** and apply a model to estimate the effect of centrifugation on sample purity
- Point out the importance of **understanding the technical limitations and challenges** associated with EV analysis (the need for standardized protocols, for example)

Download the article collection to see how accurate and consistent evaluation of EVs is crucial for the effectiveness of cellular therapies.



Download now

Flow Cytometry in Extracellular Vesicle Analysis.

Article collection.

Extracellular vesicles (EVs) are small, membrane-bound particles that are secreted by cells and play important roles in intercellular communication. They carry unique surface markers, proteins, and nucleic acids that reflect the origin and state of the cells they were secreted from.

Flow cytometry is a powerful tool for analyzing EVs

It can measure the size, concentration, and surface markers of individual particles in a heterogeneous sample. It can also help identify and quantify EV subpopulations that are associated with disease, which can aid in early detection, diagnosis, and monitoring of disease progression.

In our latest article collection, we've gathered papers that illustrate the role of flow cytometry in the evaluation of extracellular vesicles in fundamental research, biomarkers, and cellular therapy products.

Here's a taster of what you'll find:

A brief history of nearly EV-erything – The rise and rise of extracellular vesicles.

Couch et al. (2021)

Centrifugation Affects the Purity of Liquid Biopsy-Based Tumor Biomarkers.

Rikkert et al. (2018)

MIFlowCyt-EV: The Next Chapter in the Reporting and Reliability of Single Extracellular Vesicle Flow Cytometry Experiments.

Welsh et al. (2021)

In the final piece, authors examine the development of the MIFlowCyt-EV framework position statement, put together with the aim of improving the reporting and reliability of single EV flow cytometry experiments. The authors:

- Discuss how the **reporting framework facilitates consistency** between EV measurement, data reproducibility, and experimental interpretation
- Provide an **overview of the current challenges** associated with EV analysis (the small size of EVs, signal calibration, and swarm detection, for example)
- Examine the **importance of standardization** in EV analysis
- Provide a **roadmap for transparent and reproducible EV data** generated by flow cytometry, which ultimately expedites the advancement of EV-based diagnostic and therapeutic applications