Exosome Reserach Solutions

1- Isolation

MassivEV™ EV Purification Column PS / MassivEV™ Purification Buffer Set

This is often the preferred option when bead-free workflows are desired.

- Bead-free, PS–Tim4 affinity–based isolation (Tim4 immobilized on resin inside the column)
- Suitable for small to large volumes of cell culture supernatant (from ~10 mL up to several liters)
- More practical and cost-efficient compared to ultracentrifugation
- Does not require specialized equipment such as TFF systems

(a standard peristaltic pump is sufficient)

- Columns can be re-used multiple times when working with the same sample (can be used up to 5 times)

Processing Capacity

	1 mL (Product No. 131-19491)	5 mL (Product No. 137-19493)
Sample volume*1	200 mL	1 L
Dynamic binding capacity*2	5×10^{11} particles/mL resin	2.5×10^{12} particles/5 mL resin

*1: The volume mentioned is an approximate amount of MSC culture supernatant that can be processed in a single purification. The sample volume required may vary depending on the concentration of EV particles present in the cell culture supernatant. Note that the same column can be reused multiple times for processing the same sample. Fujifilm Wako has confirmed that the column can be used repeatedly up to five times, comprising one initial use and four subsequent repeat uses.
*2: This information is based on studies using EVs derived from MSCs. Results may vary depending on the cell type and other conditions.

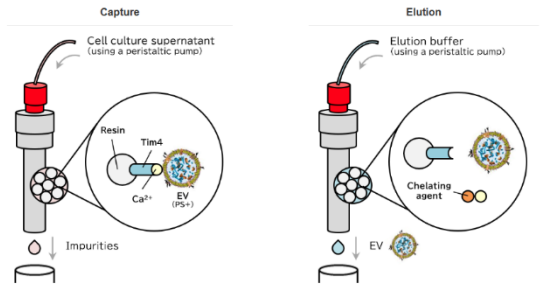


Figure 1 Principle of isolation and purification of EVs using the MassivEV™ EV Purification Column PS (PS affinity method)

You can find the user manuel and short YouTube video;

[Protocol] MassivEV EV Purification Column PS

We also support magnetic bead–based isolation (MagCapture™ EV kits) if that approach is of interest, depending on your preferred workflow.

MagCapture™ EV Isolation Kit PS for HTS

The MagCapture™ EV Isolation Kit PS for HTS is based on the phosphatidylserine (PS)–TIM4 affinity method and is specifically designed for the isolation and purification of extracellular vesicles (EVs) using automated extraction platforms, such as the KingFisher™ Flex (Thermo Fisher Scientific).

Key highlights:

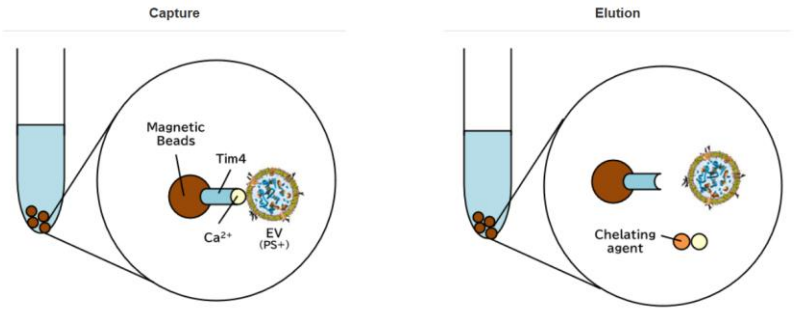
- Compatible with automated liquid handling and magnetic bead-based extraction systems
- Processes up to 96 samples simultaneously, making it ideal for:
- Biomarker discovery
- High-throughput screening (HTS)
- Standardized EV workflows

Suitable sample types include:

- Cell culture supernatant
- Serum
- Plasma
- Urine
- Saliva

This kit significantly reduces hands-on time while improving reproducibility and scalability, especially in labs handling large sample volumes.

You can find the user manual and a short YouTube demonstration video here: Isolation and purification of EVs for high-throughput screening - YouTube



You can find the user manuel and short YouTube video;

[Isolation and purification of EVs for high-throughput screening

2- **Exosome Quantification & Validation:**

Depending on your study goals, we typically recommend one of the following:

a- Flow Cytometry & Exosome Marker Antibodies

Exosome Marker Antibodies | [Life Science]Products | Laboratory Chemicals-FUJIFILM Wako Pure Chemical Corporation)

If you already isolated your EV's from your sample, you can perform flow cytometry without beads and just stain your sample (we have also just the anti-bodies as unlabeled or labeled:

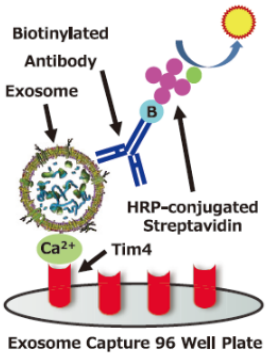
- Direct staining of isolated EVs (no beads required)
- Antibodies available for CD9, CD63, CD81, in labeled or unlabeled formats

b- Elisa Kits

(Exosome ELISA Kits | [Life Science]Products | Laboratory Chemicals-FUJIFILM Wako Pure Chemical Corporation)

- Suitable when the primary goal is quantification or confirmation of exosome presence
- Two principles available:
- CD9 / CD63 / CD81–coated ELISA kits
- Tim4-based ELISA kits

Assay Principle



Exosome Capture 96 Well Plate which is pre-coated with protein that specifically binds to phosphatidylserine (PS) on the surface of extracellullar vesicles (EVs) capture EVs with Ca^{2+}, Then biotinylated antibody for the surface marker protein of EVs is used as a primary detection and HRP-conjugated streptavidin is used as a secondary detection.