EVtrap™ Exosome Isolation Kit

JOT-EV-02-01-01

Product Overview

This kit employs magnetic beads for the extraction of extracellular vesicles (EVs). The magnetically functional beads within the kit possess the capability to selectively capture the entire range of extracellular vesicles, enabling for the extraction of intact EVs from various liquid samples, including urine, saliva, or cell culture supernatant. Notably, this process eliminates the requirement for high-speed centrifugation. Furthermore, the kit facilitates the simultaneous processing of multiple samples, offering a convenient and efficient solution for users.

Components and Storage Conditions

Reagents	Specifications	Storage Conditions
EVtrap™ magnetic beads	1 mL	4℃
Incubation buffer Ⅰ	5 mL	RT
Incubation buffer Ⅱ	50 mL	RT
Washing Buffer	50 mL	4℃
Elution Buffer	20 mL	RT

Protocol

This kit is suitable for various samples, including urine, cell culture supernatant, saliva, cerebrospinal fluid, etc. Refer to the table below for specific usage proportions:

Sample	Volume	EVtrap™ magnetic usage
Urine	1 mL	20 μL
Cell supernatant	1 mL	5 μL
Saliva	1 mL	50 μL
Cerebrospinal fluid	1 mL	50 μL

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In the case of urine samples, the operating procedure is as follows:

Preparation

Collect morning urine (midstream urine) and centrifuge at 2500g for 10 minutes to remove cellular debris. Collect the supernatant. Then repeat the centrifugation step once. Store the processed urine at -80°C for future use.

EVs Isolation

1. Add 1 mL of Incubation buffer to 10 mL of urine. Mix thoroughly (If the urine is stored at -80°C, it needs to be thawed in a 37°C water bath).
2. Add 200 µL of EVtrap™ magnetic beads. Incubate at room temperature for 0.5-1 hour. Then separate and remove the supernatant after magnetic adhesion.
3. Add 10 mL of Incubation Solution. Invert and mix 20-30 times, then separate and remove the supernatant after magnetic adhesion.
4. Add 5 mL of Washing Buffer. Invert and mix 20-30 times, separate and remove the supernatant after magnetic adhesion, and perform one wash.
5. Add 1 mL of Washing Buffer. Invert and mix 20-30 times, transfer to a 1.5 mL centrifuge tube, and remove the supernatant after magnetic adhesion.
6. Add 200 µL of Elution Buffer, vortex for 10 minutes.
7. Collect the eluate using a magnetic separator, repeat step 6, combine the eluates from both rounds (total 400 µL) into one centrifuge tube, vortex, and briefly centrifuge.
8. Lyophilize the eluate, store the lyophilized sample at -80°C for long-term storage, or use it for downstream detection experiments.

Precautions and Disclaimer

Store EVtrap™ magnetic beads at 4°C and keep Incubation buffer and washing buffer at room temperature.

Use a high magnetic force rack during magnetic adhesion to ensure effective capture of extracellular vesicles by the magnetic beads.

Avoid vigorous vortexing during any washing step. Simply invert the sample 20-30 times to disperse the clustered magnetic beads after magnetic adhesion.

Handle with care during the post-incubation steps when inverting to mix, to prevent detachment of extracellular vesicles captured by EVtrap™ magnetic beads.

This product is limited to scientific research use by professionals and should not be used for clinical diagnosis or treatment, nor for food or medicine.

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