TECHNICAL MANUAL

Exosome Isolation Kit (Precipitation)

- **SKU CODE:** AKES236
- **SIZE:** 20T/50T
- **RUO:** Research-Use-Only

Revised: 05/2026

Exosome Isolation Kit (Precipitation)

Please read entire manual carefully before starting experiment.

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1. General Information

Product Form:

Liquid

Mycoplasmal Detection:

Negative

Animal Origin Ingredient:

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Endotoxin Level (EU/mL):

< 3

Sample type:

Serum, plasma, cell culture supernatants and urine

2. Storage & Expiry

This product should be stored at 2-8°C in dark conditions for up to 18 months. The expiration date is indicated on the outer label of the kit box.

3. Product Description

The Assay Genie Exosome Isolation Kit (Precipitation) kit enables efficient exosome isolation using a precipitation-based method optimized for a broad range of biological sample types. It provides a streamlined workflow with minimal hands-on time, rapid processing, and high exosome recovery. The isolated exosomes are suitable for diverse downstream applications, including Western blotting, nanoparticle tracking analysis (NTA), nanoparticle flow cytometry for particle-size characterization, electron microscopy, multi-omics profiling, and functional studies in both cellular and in vivo models.

This dual function kit includes validated Bradford Reagent to quantify total protein concentration for accurate sample normalization.

4. Kit Contents

No	Component Name	20 Tests	50 Tests	Storage
1	Exosome Precipitation Solution	10 mL	25 mL	2~8 °C (protected from light)
2	Solution A	25 mL	25 mL	2~8 °C (protected from light
3	Bradford Reagent	1 vial (2 mL)	1 vial (2 mL)	RT

Additional Instruments:

- High-speed refrigerated centrifuge
- Centrifuge tubes

5. Important Notes

1. This product is intended for research use only and is not for diagnostic or therapeutic applications.
2. The reagent may cause irritation. Avoid direct contact with skin, eyes, and mucous membranes, and prevent inhalation of vapors or aerosols.
3. Appropriate personal protective equipment, including lab coats, disposable gloves, and eye protection, should be worn at all times. All procedures should follow standard laboratory safety guidelines for chemical reagents.

6. Protocol

Preparation

1. Remove the components (Exosome Precipitation Solution, Solution A) stored at 2-8°C from the refrigerator and bring them to room temperature.
2. It is recommended to use fresh samples. If the samples are stored at -80°C, thaw them in a 37°C water bath and set a side.

Sample Processing

1. Cell Removal: Centrifuge the sample at 300×g for 5minutesat 4°C. Carefully transfer the supernatant to a new centrifuge tube. ***Note:*** *This step can be skipped for cell-free samples*.
2. Removal of Cellular Debris: Centrifuge the supernatant obtained from Step 1 at 2,000×g for 10 minutes at 4°C. Transfer the supernatant to a new centrifuge tube.
3. Removal of Large Particles: Centrifuge the supernatant obtained from Step 2 at 14,000×g for 30 minutes at 4°C. Carefully transfer the result in g supernatant to a new centrifuge tube. ***Note:*** *Alternative method for removing large particles (large vesicles): Filter the supernatant obtained in step 2) through a 0.2 μm microporous filter and collect the filtrate.*

Exosome Precipitation

1. Select the appropriate procedure based on Exosome sample type:
    a. Operation protocol of serum and plasma exosome samples Transfer 500 µL of the processed sample to a 1.5 mL centrifuge tube, add 500 µL of Solution A, mix well, and then add 250 µL of Exosome Precipitation Solution. Invert and mix thoroughly. ***Note:*** *If the serum/plasma exosome sample volume needs adjustment, scale the volumes according to the ratio: sample: Solution A: Exosome Precipitation Solution = 2:2:1. This ratio can be scaled up or down accordingly*.
    b. Operation protocol of cell culture supernatant and urine exosome samples Transfer 1 mL of the processed sample to a 1.5 mL centrifuge tube, add 250 µL of Exosome Precipitation Solution, and invert to mix thoroughly.
        i. If the sample volume is too large, it can be concentrated to 1-2 mL before proceeding with this step.
        ii. If adjustment of cell culture supernatant/urine exosome sample volume is needed, scale according to the ratio: sample: Exosome Precipitation Solution = 4:1, scaling up or down as necessary.
2. Incubate at room temperature for 30min (rapid flow): ***Note:*** *If the time permits, 4°C overnight incubation is recommended (for higher recovery)*.
3. Centrifuge at 4°C, 12,000 g for 30 minutes, and discard the supernatant: ***Note:*** *After discarding or carefully aspirating the supernatant, use a 200 µL pipette to remove as much residual supernatant as possible.*
4. Exosome Recovery
    a. Re-suspend the exosome pellet. Add 200 µL of Solution A to the precipitate and gently pipette up and down to mix.
    b. Collect the exosome particles. Transfer the re-suspended solution to a new 1.5 mL centrifuge tube and centrifuge at 4°C, 12,000 g for 5 minutes. Retain the supernatant, which is rich in exosome particles. ***Note:*** *If a large pellet remains, collect the supernatant after centrifugation, then centrifuge at 12,000 g for 5*

minutes multiple times until no significant pellet remains. The final supernatant will contain the exosomes.

c. The separated exosomes can be used for subsequent experiments immediately. If experiments are not performed within 24 hours, store at 4°C. Otherwise, aliquot and store at-80°C.

Assay Genie 100% money-back guarantee!

If you are not satisfied with the quality of our products and our technical team cannot resolve your problem, we will give you 100% of your money back.

Manufacturers Statement: This final kit system is assembled and quality-released by Assay Genie Limited.