

Product Description

Exosomes are small vesicles (30–150 nm) containing RNA, protein, and lipids that are secreted by various types of cells in culture, and found in abundance in body fluids including blood, saliva, urine, and breast milk. Exosomes are thought to function as intercellular messengers, delivering their cargo of effector or signaling macromolecules between specific cells, however, their formation, the makeup of the cargo, and biological pathways in which they are involved remain incompletely understood. The biological study of exosome function and trafficking requires the isolation of intact exosomes, but the current methods like ultracentrifugation used are tedious, non-specific, and difficult. Exosure reagent provides a simple and reliable method of concentrating intact exosomes from cell culture media samples and serum. Exosure reagent forces less-soluble components (i.e. exosomes) out of solution, allowing them to be collected after brief, low-speed centrifugation.

Product Contents

Catalog No	Volume	Storage
EXP001-10ML	10ml	2-8°C
EXP001-50ML	50ml	2-8°C

General Guidelines

- To ensure that isolated exosomes originate from your cells of interest, culture the cells with exosome depleted fetal bovine serum (FBS), because normal FBS contains extremely high levels of exosomes that will contaminate the cell derived exosomes.
- If you cannot obtain exosome depleted FBS, certain cell lines can be grown for up to 12 hours in media without FBS.
- Exosure can be used for isolating exosomes from both serum as well as cell culture supernatant.

Protocol

From Serum

- Transfer the required volume of isolated blood serum to a fresh clean tube.
- Add 0.2 volumes of the Exosure exosome isolation reagent to the serum (eg. for 100µl of serum add 20µl of reagent)
- Mix the serum & reagent mixture well by vortexing until there is a homogenous solution (the solution should have a cloudy appearance).
- Incubate the sample at 4°C in a standing position for 30 minutes.
- After incubation, centrifuge the sample at 10,000rpm for 10 mins at 4°C.
- Discard the supernatant; exosomes are contained in the pellet at the bottom of the tube.
- Resuspend the pellet in a convenient volume of 1X PBS.

From Cell culture supernatant

- Aliquot 1ml of cell culture supernatant in a microcentrifuge tube
- Spin at 4000rpm for 30mins to remove cell debris
- Harvest the supernatant in a fresh tube
- Add 500µl of Exosure exosome isolation reagent
- Vortex vigorously and keep at 4°C for 16hrs or overnight in an upright position.
- Spin at 13,000rpm for 60 mins at 4°C
- Discard the supernatant and dissolve the exosomal pellet (which may not be visible) in 50µl of chilled PBS

Starting Volume	Resuspension Volume
100 µL of Serum	25-50 µL
1ml of Serum	200-500 µL
1ml cell culture media	25-50 µL
10ml cell culture media	100 µL–1 mL

**Note: Once the pellet is resuspended, the exosomes are ready for downstream analysis or further purification through affinity methods.*

Keep isolated exosomes at 2°C to 8°C for up to 1 week, or at ≤20°C for long-term storage.

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Technical Assistance

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