

Exosome Detachment Solution

Name	Reference	Description	Format	Volume
Exosome Detachment Solution	EDStep	Antibody-bead complex exosome detachment solution	Liquid	10ml

1. INTRODUCTION



Exosomes are small extracellular vesicles that are released from cells upon fusion of an intermediate endocytic compartment, the multivesicular body (MVB)¹, with the plasma membrane. They are thought to provide a means of intercellular communication and of transmission of macromolecules between cells allowing the spread of proteins, lipids, mRNA, miRNA and DNA and as contributing factors in the development of several diseases.

The biological characterization of exosomes requires in most cases the isolation of intact exosomes. In this sense, many methods have been developed for the isolation of exosomes from biological fluids, among which are ultracentrifugation, chromatography, filtration, polymer-bases precipitation and immunological separation². As a rule, the use of immunological methods requires the use of a solid substrate, usually magnetic beads, coated with antibodies or ligands directed against specific antigens on the exosome surface, allowing their specific isolation. In this way, in some cases for downstream exosome analysis it is necessary to elute the exosomes from the antibody-bead complex, avoiding potential interference.

2. PRODUCT DESCRIPTION

The exosome detachment solution of the antibody-pearl complex is based on chaotropic agent and low pH (3) which allows a recovery of approximately 50% (recovery depends on the type of exosome) without destabilising the exosomes using a simple protocol.

3. INTENT OF USE

This solution has been designed to elute the exosomes from the antibody-bead complex and allow downstream analysis of the immunopurified exosomes without any type of interference. This product is compatible with #ExoStep kits family and #Capture beads product range. Please visit our website for more information: <https://exosomes.immunostep.com/>

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4. APPROPRIATE STORAGE AND HANDLING CONDITIONS

Store in the dark, refrigerated between 2°C and 8°C. DO NOT FREEZE. The reagent is stable until the expiry date stated on the vial label if kept at 2-8°C. Do not use after indicated date.

5. WARRANTY

Warranted to conform to the quantity and contents stated on the label or in the product labelling at the time of delivery to the customer. Immunostep disclaims hereby other warranties. Immunostep's sole liability to either the replacement of the products or refund of the purchase price.

6. PROTOCOL

After Immunopurification, are captured by antibody-bead complex, for exosome detachment follow the instructions below:

- Collect the magnetic beads by placing tubes on a magnetic rack and incubate 5 minutes or by centrifugation at 2500xg for 5 minutes and discard supernatant.
- 50ul of detached solution and incubate for 2h at 37°C.
- After incubation, remove the magnetic beads by placing tubes on a magnetic rack and incubate 5 minutes or by centrifugation at 2500xg for 5 minutes and collect the supernatant containing, the free exosomes, once detached from the antibody-bead, ready for downstream analysis.

*Warning: It is possible that during the decoupling process, not 100% of the captured exosomes will be recovered, as this depends on the type of exosomes and the capture system used.

7. REFERENCES

- Yáñez-Mó M, Siljander P, Andreu Z, Bedina Zavec A, Borràs F, Buzas E et al. Biological properties of extracellular vesicles and their physiological functions. *Journal of Extracellular Vesicles*. 2015;4(1):27066.
- Osteikoetxea X, Sódar B, Németh A, Szabó-Taylor K, Pálóczi K, Vukman KV, Tamási V, Balogh A, Kittel Á, Pállinger É, Buzás EI. Differential detergent sensitivity of extracellular vesicle subpopulations. *Org Biomol Chem*. 2015 Oct 14;13(38):9775-82.

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