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## MojoSort™ Mouse CD45 Nanobeads Protocol - Selection [↗](#)

Sam Li<sup>1</sup><sup>1</sup>BioLegend

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Works for me

[dx.doi.org/10.17504/protocols.io.7wihpce](https://doi.org/10.17504/protocols.io.7wihpce)

BioLegend

Sam Li  
BioLegend

### ABSTRACT

#### Product description and procedure summary:

The cells targeted by the Nanobeads are selected by incubating your sample with the directly conjugated magnetic particles. The magnetically labeled fraction is retained by the use of a magnetic separator. After collection of the targeted cells, downstream applications include functional assays, gene expression, phenotypic characterization, etc.

**Note:** This procedure is optimized for the isolation of  $10^7$  to  $2 \times 10^8$  cells per tube. If working with fewer than  $10^7$  cells, keep volumes as indicated for  $10^7$  cells. For best results, optimize the conditions to your specific cell number and tissue. Prepare fresh MojoSort™ Buffer solution by diluting the 5X concentrate with sterile distilled water. *Scale up volumes if using 14mL tubes and Magnet, and place the tube in the magnet for 10 minutes.*

### EXTERNAL LINK

<https://www.biolegend.com/protocols/mojosort-mouse-cd45-nanobeads-protocol-selection/4750/>

### GUIDELINES

MojoSort™ magnetic particles can be used with other commercially available magnetic separators, both free standing magnets and column-based systems. Because MojoSort™ protocols are optimized for the MojoSort™ separator, the protocols may need to be adjusted for other systems. Please contact BioLegend Technical Service ([tech@biolegend.com](mailto:tech@biolegend.com)) for more information and guidance. We do not recommend using MojoSort™ particles for BD's IMag™ or Life Technologies' DynaMag™.

**Application notes:** To use this product in magnetic separation columns, a titration of the Nanobeads should be performed. Optimal concentration for magnetic separation columns is lot-specific. Please contact BioLegend Technical Service ([tech@biolegend.com](mailto:tech@biolegend.com)) for further assistance on how to use MojoSort™ Nanobeads in magnetic separation columns.

### MATERIALS

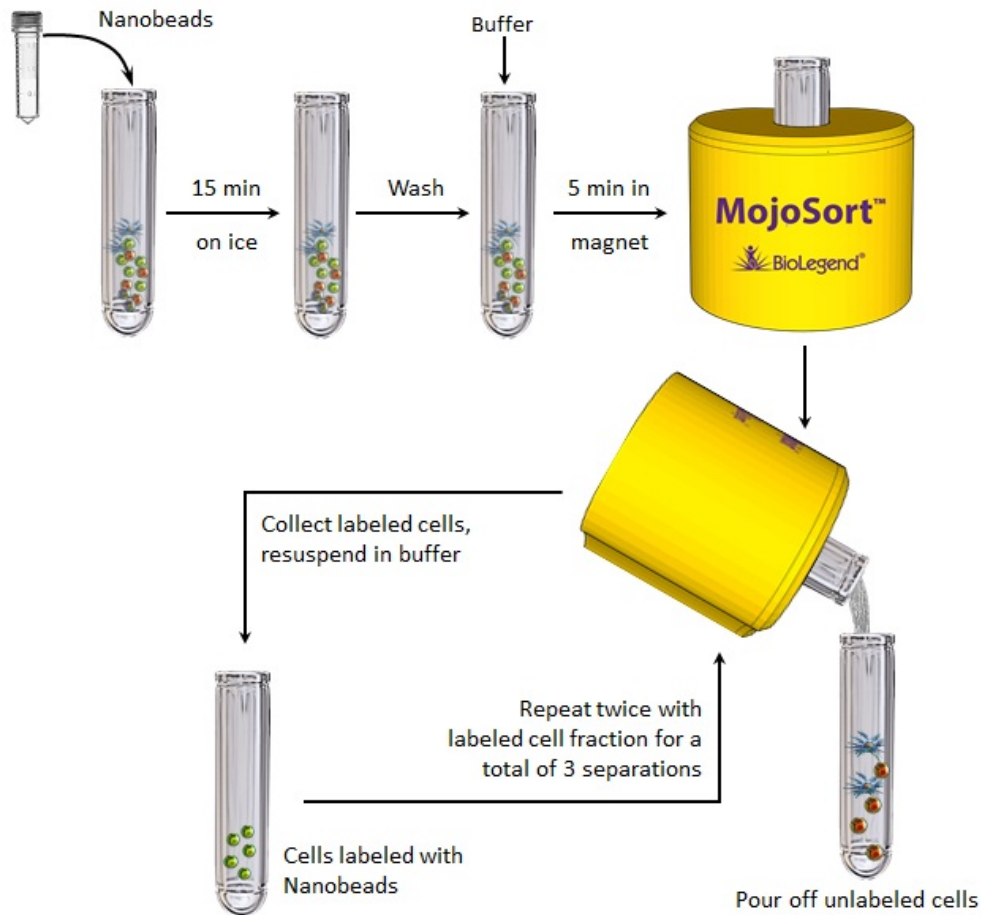
NAME <a href="#">▼</a>	CATALOG # <a href="#">▼</a>	VENDOR <a href="#">▼</a>
<a href="#">MojoSort™ Buffer</a>	<a href="#">480017</a>	<a href="#">BioLegend</a>
<a href="#">MojoSort™ Magnet</a>	<a href="#">480019</a>	<a href="#">BioLegend</a>
<a href="#">MojoSort™ Mouse CD45 Nanobeads</a>	<a href="#">480027, 480028</a>	<a href="#">BioLegend</a>

### MATERIALS TEXT

- Adjustable pipettes
- 70µm filters (one per sample)
- 5mL (12 x 75mm) or 14mL (17 x 100mm) polypropylene tubes
- Reagents for sample preparation
- Reagents and instruments (Flow cytometer) to determine yield and purity

- 1 Prepare cells from your tissue of interest or blood without lysing erythrocytes.
- 2 In the final wash of your sample preparation, resuspend the cells in MojoSort™ Buffer by adding up to 4 mL in a 5 mL (12 x 75 mm) polypropylene tube.  
**Note:** Keep MojoSort™ Buffer on ice throughout the procedure.
- 3 Filter the cells with a 70µm cell strainer, centrifuge at 300xg for 5 minutes, and resuspend in an appropriate volume of MojoSort™ Buffer. Count and adjust the cell concentration to  $1 \times 10^8$  cells/mL.
- 4 Aliquot 100 µL of cell suspension ( $10^7$  cells) into a new tube.
- 5 Resuspend the beads by vortexing, maximum speed, 5 touches. Add **10µL of Antibody Nanobeads**. Mix well and **incubate on ice for 15 minutes**. Scale up the volume accordingly if separating more cells. For example, add 100 µL of Nanobeads for separating  $1 \times 10^8$  cells in 1 ml of MojoSort™ Buffer. When working with less than  $10^7$  cells, use indicated volumes for  $10^7$  cells.
- 6 Wash the cells by adding MojoSort™ Buffer up to 4mL. Centrifuge the cells at 300xg for 5 minutes.
- 7 Discard the supernatant.
- 8 Add 2.5mL of MojoSort™ Buffer.  
**Note:** If you observe aggregates, filter the suspension. To maximize yield, you can disrupt the aggregates by pipetting the solution up and down.
- 9 Place the tube in the magnet for 5 minutes.  
*Optional: Take a small aliquot before placing the tube in the magnet to monitor purity and yield. Keep unused cells to be used as control or other applications if needed.*
- 10 Pour out the unlabeled fraction. Resuspend the labeled cells in 2.5mL MojoSort™ Buffer (THESE ARE YOUR CELLS OF INTEREST).

- 11 Repeat steps 8-10 on the labeled fraction twice more for a total of **3 separations**. Pool the unlabeled fractions and keep the labeled cells. The fraction that is not of interest may be useful as staining controls, to monitor purity/yield, or other purposes.  
*Optional: Take a small aliquot to monitor purity and yield.*



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