Technical Data Sheet

Cell Separation Magnet

Product Information

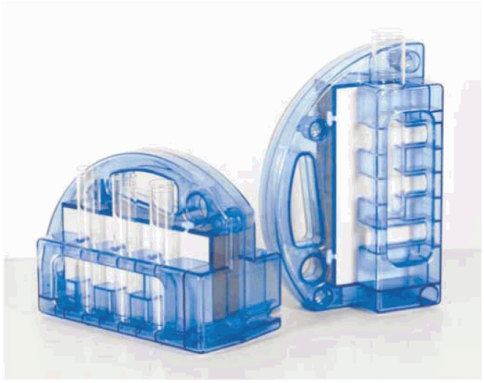
Material Number: **552311**

Description

The BD IMagnet™ is a specialized plastic test-tube rack surrounding a strong permanent rare earth magnet. It holds up to six 12 x 75-mm or two 17 x 100 mm round-bottom test tubes (e.g., BD Falcon™, Cat. No. 352058 and 352057) in optimal position for magnetic separation of leukocytes labeled with BD IMag™ particles - DM. When tubes containing BD IMag™-labeled cell suspensions are placed in the BD IMagnet™, the magnetic field attracts the labeled cells to the adjacent walls of the tubes, allowing removal of the supernatant containing any unlabeled cells. When the tubes are subsequently removed from the BD IMagnet™, the labeled cells may be harvested. This simple system allows rapid and effective positive or negative selection of desired leukocyte populations.

The BD IMagnet™ contains a strong permanent magnet that may affect or damage delicate instruments, electronic equipment, and magnetic recording devices. Therefore, **persons wearing cardiac pacemakers should not handle the BD IMagnet™**, and the BD IMagnet™ should not be placed near laboratory instruments, monitors, computer discs, credit cards, video or audio cassettes, and watches. The BD IMagnet™ has a very strong attraction for ferric metals, so it should not be placed on steel surfaces or near objects containing steel or iron.

Like all precision instruments containing plastics, the BD IMagnet™ may be warped or damaged by exposure to excessive heat or UV light. If disinfection is required, it may be wiped with alcohol or bleach solutions. Do not boil, autoclave, or expose the BD IMagnet™ to artificial UV light.



The BD IMagnet™ may be alternately positioned for use with two standard sizes of laboratory test tubes.

Application Notes

Application

Cell separation	Routinely Tested

Recommended Assay Procedure:

BD IMag™ particles - DM are optimal for use with the BD IMagnet™. A detailed protocol for both positive and negative selection is attached. **BD IMag™ particles - MSC should not be used**.

For negative selection of leukocyte subsets, antibodies are selected to label the cell population(s) that are not desired. Antibody-conjugated BD IMag™ particles - DM or biotinylated antibody plus Streptavidin BD IMag™ particles - DM are used to label the cell suspension, and the labeled cells are resuspended in 1X BD IMag™ buffer. The tube(s) containing the labeled cells are then placed in the BD IMagnet™, where the labeled cells are attracted to the magnet, and the desired cells remain suspended in the supernatant. With the tube(s) in the BD IMagnet™, the supernatant is harvested to obtain the desired leukocyte population.

For positive selection of leukocyte subsets, antibodies are selected to label the desired cell population. Antibody-conjugated BD IMag™ particles -DM or biotinylated antibody plus Streptavidin BD IMag™ particles - DM are used to label the cell suspension, and the labeled cells are resuspended in 1X BD IMag™ buffer. The tube(s) containing the labeled cells are then placed in the BD IMagnet™, where the desired cells are

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attracted to the magnet. With the tube(s) in the BD IMagnet™, the supernatant is removed to discard the undesired leukocytes. Then the tube is removed from the BD IMagnet™ to allow harvesting of the desired cells.

BD IMagnet™ Protocol
This protocol is suitable for separation of single-cell suspensions of 1 x 10e7 to 2 x 10e8 leukocytes in 0.5 to 10 ml.

1. Label pairs of tubes appropriately to collect positive and negative fractions and place these on ice. Dilute BD IMag™ Buffer (10X) (Cat. No. 552362) 1:10 with sterile distilled water or prepare 1X BD IMag™ buffer from scratch (Phosphate Buffered Saline, 0.5% BSA, 2 mM EDTA, and 0.09% sodium azide) and place on ice.

Steps 2 - 5 should be performed for both positive and negative selection.

2. After the cells have been labeled with BD IMag™ particles - DM, adjust the cell concentration to 2 x 10e7 cells/ml with cold 1X BD IMag™ buffer.

3. Transfer the BD IMag™-labeled cell suspension to the positive-fraction collection tube(s):
- 12 x 75 mm tube: minimum volume of 0.5 ml and maximum volume of 3.5 ml
- 17 x 100 mm tube: minimum volume of 3.0 ml and maximum volume of 10 ml

4. Place the positive-fraction tube(s) into the appropriate tube holder(s) on the BD IMagnet™
- 12 x 75 mm tube: leave on the BD IMagnet™ for 6 minutes
- 17 x 100 mm tube: leave on the BD IMagnet™ for 10 minutes

5. With the positive-fraction tube(s) on the BD IMagnet™, remove the supernatant (negative fraction) using a glass pasteur pipette and transfer the negative fraction into the negative-fraction tube(s). Negative cell separation has now concluded. If positive selection is desired, continue to Step 6. If positive selection is **not** desired, go directly to Step 11.

6. Remove the positive-fraction tube(s) from the BD IMagnet™, and place on ice.

To further purify the positive fraction, we recommend the addition of Steps 7 - 10.

7. Add 1 ml of cold 1X BD IMag™ buffer to each positive-fraction tube. Resuspend cells by gently pipetting or vortexing. Place the tube(s) back on the BD IMagnet™.
- 12 x 75 mm tube: leave on the BD IMagnet™ for 2 minutes
- 17 x 100 mm tube: leave on the BD IMagnet™ for 5 minutes

8. Using a new glass pasteur pipette, remove supernatant and discard.

9. Repeat Steps 6, 7, and 8 one more time.

10. Remove the positive-fraction tube(s) from the BD IMagnet™ and place it on ice. Add 1 ml of cold 1X BD IMag™ buffer to each positive-fraction tube. Resuspend cells by gently pipetting or vortexing. Positive-cell separation has now concluded.

11. Positive and negative fractions can now be resuspended in appropriate buffers for further downstream applications, including flow cytometry.

Suggested Companion Products

Catalog Number	Name	Size	Clone
552362	Buffer (10X)	100 ml	(none)
557812	Streptavidin Particles Plus - DM	5.0 ml	(none)

Product Notices

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.