



Procedure For Positive & Negative Selection Of Human Cells

(for mouse or other cells, see reverse)

CAUTION:

The EasySep[®] Magnet generates a strong magnetic field. Keep away from pacemakers, magnets, computer disks, watches, and other objects that respond to magnetic fields.

PRODUCT DESCRIPTION:

A sealed anodized aluminum body housing rare earth magnetic elements.

CARE OF MAGNET:

After completing a cell separation, wipe the magnet clean with distilled water and then with alcohol to dry the magnet. Do not clean with bleach.

EASYSEP[®] PROCEDURE WITH "THE BIG EASY" EASYSEP[®] MAGNET:

When performing an EasySep[®] cell separation using "The Big Easy" magnet, the procedure provided with the EasySep[®] cocktail needs to be modified to account for the larger tube size. For optimal results, please follow the instructions corresponding to your application.

Note: RoboSep[®], our automated cell separator, is designed to use "The Big Easy" magnets. Procedures pre-programmed in the RoboSep[®] Software do not need to be modified.

General Instructions:

- "The Big Easy" EasySep[®] Magnet is designed to hold a 17 x 100 mm polystyrene tube (we recommend Falcon[®] 14 mL Tubes, Becton Dickinson, Catalog #352057).
- The maximum initial cell suspension volume for the labeling step is 8 mL, the minimum cell suspension volume is 250 μ L.
- For samples with low cell numbers (< 2.5 x 10⁷ cells), recovery may be improved by using a 2.5 mL resuspension volume before separation, or by using the purple EasySep[®] Magnet (Catalog #18000).

PROCEDURE



Version 2.1.0

Magnets

+EasySep[®]

"The Big Easy"
EasySep[®]
Magnet

CATALOG #18001

Special Instructions For Human Positive Selection:

Recommended Procedure Modifications When Using "The Big Easy" Magnet for EasySep [®] Human Positive Selection					
Cell Type	Initial Cell Suspension Concentration	Initial Cell Suspension Volume	Separation and Wash Volume	Rounds of Magnetic Separation	
All cell types not listed below	1 - 1.25 x 10 ⁸ cells/mL	250 μ L - 8 mL	< 10 ⁸ cells: 5 mL 10 ⁸ - 10 ⁹ cells: 10 mL	3	
CD3 ⁺ or CD4 ⁺	1 - 1.25 x 10 ⁸ cells/mL	250 μ L - 8 mL	< 10 ⁸ cells: 5 mL 10 ⁸ - 10 ⁹ cells: 10 mL	2	
CD10 ⁺ or MUC ⁺	2 - 2.5 x 10 ⁸ cells/mL	250 μ L - 8 mL	< 2 x 10 ⁸ cells: 5 mL 2 x 10 ⁸ - 2 x 10 ⁹ cells: 10 mL	3	
EpCAM ⁺	2 - 2.5 x 10 ⁸ cells/mL	250 μ L - 8 mL	< 2 x 10 ⁸ cells: 5 mL 2 x 10 ⁸ - 2 x 10 ⁹ cells: 10 mL	4	
CD34 ⁺	starting with < 2 x 10 ⁸ cells	2 x 10 ⁸ cells/mL	250 μ L - 1 mL	5 mL	4
	2 - 5 x 10 ⁸ cells	2 - 5 x 10 ⁸ cells/mL	1 mL	5 mL	4
	5 x 10 ⁸ - 2 x 10 ⁹ cells	5 x 10 ⁸ cells/mL	1 mL - 4 mL	10 mL	4

Special Instructions For Human Negative Selection:

For all cell types: Use a **10 minute** incubation time for each round of magnetic separation in "The Big Easy" Magnet (instead of 5 minutes in the standard EasySep[®] procedure). Shorter incubations for the magnetic separation reduce purity; longer incubations will not significantly improve performance.

Recommended Procedure Modifications When Using "The Big Easy" Magnet for EasySep [®] Human Negative Selection				
Cell Type	Initial Cell Suspension Concentration	Initial Cell Suspension Volume	Separation and Wash Volume	Rounds of Magnetic Separation
All cell types	5 x 10 ⁷ cells/mL	500 μ L - 8 mL	< 10 ⁸ cells: 5 mL 10 ⁸ - 4 x 10 ⁸ cells: 10 mL	2

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FOR RESEARCH USE ONLY

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Procedure For Positive & Negative Selection Of Mouse Cells

or for use with indirect selection reagents
(for human cells, see reverse)

CAUTION:

The EasySep[®] Magnet generates a strong magnetic field. Keep away from pacemakers, magnets, computer disks, watches, and other objects that respond to magnetic fields.

PRODUCT DESCRIPTION:

A sealed anodized aluminum body housing rare earth magnetic elements.

CARE OF MAGNET:

After completing a cell separation, wipe the magnet clean with distilled water and then with alcohol to dry the magnet. Do not clean with bleach.

EASYSEP[®] PROCEDURE WITH "THE BIG EASY" EASYSEP[®] MAGNET:

When performing an EasySep[®] cell separation using "The Big Easy" magnet, the procedure provided with the EasySep[®] cocktail needs to be modified to account for the larger tube size. For optimal results, please follow the instructions corresponding to your application.

Note: RoboSep[®], our automated cell separator, is designed to use "The Big Easy" magnets. Procedures pre-programmed in the RoboSep[®] Software do not need to be modified.

General Instructions:

- "The Big Easy" EasySep[®] Magnet is designed to hold a 17 x 100 mm polystyrene tube (we recommend Falcon[®] 14 mL Tubes, Becton Dickinson, Catalog #352057).
- The maximum initial cell suspension volume for the labeling step is 8 mL, with a maximum concentration of 1.25×10^8 cells/mL.
- The minimum cell suspension volume is 250 μ L.
- For the magnetic separation and wash steps, bring the total volume to 10 mL for separation of more than 10^8 cells, and to 5 mL for lower cell numbers.
- For samples with low cell numbers ($< 2.5 \times 10^7$ cells), recovery may be improved by using a 2.5 mL resuspension volume before separation, or by using the purple EasySep[®] Magnet (Catalog #18000).

PROCEDURE



Version 2.1.0

Magnets

+EasySep[®]

"The Big Easy"

EasySep[®]

Magnet

CATALOG #18001

Special Instructions For Mouse Positive Selection:

Recommended Procedure Modifications When Using "The Big Easy" Magnet for EasySep [®] Mouse Positive Selection				
Cell Type	Initial Cell Suspension Concentration	Initial Cell Suspension Volume	Separation and Wash Volume	Rounds of Magnetic Separation
All cell types not listed below	1 - 1.25×10^8 cells/mL	250 μ L - 8 mL	$< 10^8$ cells: 5 mL 10^8 - 10^9 cells: 10 mL	3
CD90 ⁺ , CD19 ⁺	1 - 1.25×10^8 cells/mL	250 μ L - 8 mL	$< 10^8$ cells: 5 mL 10^8 - 10^9 cells: 10 mL	2
SCA1 ⁺ , CD117 ⁺ (cKIT ⁺)	2×10^8 cells/mL	250 μ L - 8 mL	$< 10^8$ cells: 5 mL 10^8 - 10^9 cells: 10 mL	3

Notes and Tips:

- Recovery may be improved by increasing magnetic separation time from 5 - 10 minutes, but for samples containing more than 10^8 cells, resulting purity may be lower.
- For separation of high frequency cells (e.g. CD90⁺ and CD19⁺ cells) with a starting prevalence of greater than 30%, using more than 2 magnetic separations will not substantially increase purity and will likely decrease recovery.

Special Instructions For Mouse Negative Selection:

For hematopoietic progenitor cells: Use a 5 minute incubation time for each round of magnetic separation in "The Big Easy" Magnet. For all other cell types: Use a **10 minute** incubation time for each round of magnetic separation in "The Big Easy" Magnet. Shorter incubations for the magnetic separation reduce purity; longer incubations will not significantly improve performance.

Recommended Procedure Modifications When Using "The Big Easy" Magnet for EasySep [®] Mouse Negative Selection				
Cell Type	Initial Cell Suspension Concentration	Initial Cell Suspension Volume	Separation and Wash Volume	Rounds of Magnetic Separation
Hematopoietic progenitor cells	1×10^8 cells/mL	250 μ L - 8 mL	$< 10^8$ cells: 5 mL 10^8 - 10^9 cells: 10 mL	3
All other cell types	1 - 1.25×10^8 cells/mL	250 μ L - 8 mL	$< 10^8$ cells: 5 mL 10^8 - 10^9 cells: 10 mL	2

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