Datasheet for ABIN1305246

Anti-Mouse CD90.2 (Thy1.2) Magnetic Particles

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Overview

Quantity:	10 mL
Target:	CD90.2 / Thy-1.2
Reactivity:	Mouse
Host:	Rat
Clonality:	Monoclonal
Conjugate:	Magnetic Particles
Application:	Separation (Sep)

Product Details

Brand:	BD IMag™

Target Details

Target:	CD90.2 / Thy-1.2
Alternative Name:	CD90.2 (Thy1.2) (CD90.2 / Thy-1.2 Products)
Background:	BD IMag™ anti-mouse CD90.2 (Thy-1.2) Particles - DM are magnetic nanoparticles that have monoclonal antibody conjugated to their surfaces. These particles are optimized for the positive selection or depletion of CD90.2-bearing leukocytes using the BD IMagnet™. The CD90.2 alloantigen is expressed on thymocytes, most peripheral T lymphocytes, some intraepithelial T lymphocytes (IEL, DEC), epithelial cells, fibroblasts, neurons, hematopoietic stem cells, but not B lymphocytes, of most mouse strains. 30-H12 mAb has been reported not to cross-react with mouse Thy-1.1 (e.g., AKR/J, PL), or with rat Thy-1. Leukocytes are labeled with BD IMag™ anti-mouse CD90.2 Particles - DM according to the Magnetic Labeling Protocol.

Target Details

This labeled cell suspension is then placed within the magnetic field of the BD IMagnet™ (Cat. No. 552311). Labeled cells migrate toward the magnet (positive fraction), leaving the unlabeled cells in suspension so they can be drawn off (negative fraction). The tube is then removed from the magnetic field for resuspension of the positive fraction. The separation is repeated twice to increase the purity of the positive fraction. The magnetic separation steps are diagrammed in the Separation Flow Chart. After the positive fraction is washed, the small size of the magnetic particles allows the positive fraction to be further evaluated in downstream applications such as flow cytometry.

Synonyms: Thy-1.2

Application Details

Protocol:

1. Prepare a single-cell suspension from the lymphoid tissue of interest according to standard laboratory procedures. Remove clumps of cells and/or debris by passing the suspension through a 70-µm nylon cell strainer.
2. Dilute BD IMag™ Buffer (10X) (Cat. No. 552362) 1:10 with sterile distilled water or prepare 1X BD IMag™ buffer by supplementing Phosphate Buffered Saline with 0.5% BSA, 2 mM EDTA, and 0.09% sodium azide). Place on ice. Although our experience indicates that the use of Mouse BD Fc Block™ purified anti-mouse CD16/CD32 mAb 2.4G2 (Cat. no. 553141) is not required for optimal cell separation, some laboratories may want to use it in their studies. If adding Mouse BD Fc Block™, proceed to Step 3. If not adding Mouse BD Fc Block™, proceed to Step 4.
3. Add Mouse BD Fc Block at 0.25 µg/10e6 cells, and incubate on ice for 15 minutes.
4. Wash cells with at least an equal volume of 1X BD IMag™ buffer, and carefully aspirate all the supernatant.
5. Vortex the BD IMag™ anti-mouse CD90.2 Particles - DM thoroughly, and add 50 µl of particles for every 10e7 total cells.
6. MIX THOROUGHLY. Refrigerate at 6°C - 12°C for 30 minutes.
7. Bring the BD IMag-particle labeling volume up to 1 - 8 x 10e7 cells/ml with 1X BD IMag™ buffer, and immediately place the tube on the BD IMagnet™. Incubate at room temperature for 6 - 8 minutes.
8. With the tube on the BD IMagnet™, carefully aspirate off the supernatant. This supernatant contains the negative fraction.
9. Remove the tube from the BD IMagnet™, and add 1X BD IMag™ buffer to the same volume as in Step 7. Gently resuspend cells by pipetting briefly, and return the tube to the BD IMagnet™ for another 2 - 4 minutes.

Application Details

	10. With the tube on the BD IMagnet™, carefully aspirate off the supernatant and discard. 11. Repeat Steps 9 and 10. 12. After the final wash step, resuspend the positive fraction in an appropriate buffer and at an appropriate concentration for further analysis. NOTE: Avoid nonspecific labeling by working quickly and adhering to recommended incubation times.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Aqueous buffered solution containing BSA and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4° C. Page 1 of 3551518 Rev. 5

Publications

Product cited in:	Zheng, Han, Kelsoe: "T helper cells in murine germinal centers are antigen-specific emigrants that downregulate Thy-1." in: **The Journal of experimental medicine**, Vol. 184, Issue 3, pp. 1083-91, (1997) (PubMed). Radrizzani, Carminatti, Pivetta, Idoyaga Vargas: "Developmental regulation of Thy 1.2 rate of synthesis in the mouse cerebellum." in: **Journal of neuroscience research**, Vol. 42, Issue 2, pp. 220-7, (1996) (PubMed). Ikuta, Uchida, Friedman, Weissman: "Lymphocyte development from stem cells." in: **Annual review of immunology**, Vol. 10, pp. 759-83, (1992) (PubMed). Lefrançois: "Extrathymic differentiation of intraepithelial lymphocytes: generation of a separate and unequal T-cell repertoire?" in: **Immunology today**, Vol. 12, Issue 12, pp. 436-8, (1992) (PubMed).

Publications

Phipps, Penney, Keng, Quill, Paxhia, Derdak, Felch: "Characterization of two major populations of lung fibroblasts: distinguishing morphology and discordant display of Thy 1 and class II MHC." in: **American journal of respiratory cell and molecular biology**, Vol. 1, Issue 1, pp. 65-74, (1990) (PubMed).

There are more publications referencing this product on: Product page

Images

Flow Cytometry

Image 1.