

Datasheet for ABIN1305243

Anti-Human CD19 Magnetic Particles**1** Image**3** Publications[Go to Product page](#)

Overview

Quantity:	5 mL
Target:	CD19
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	Magnetic Particles
Application:	Separation (Sep)

Product Details

Brand: BD IMag™

Target Details

Target:	CD19
Alternative Name:	CD19 (CD19 Products)

Background: BD IMag™ anti-human CD19 Particles - DM are magnetic nanoparticles that have monoclonal antibody conjugated to their surfaces. These particles are optimized for the positive selection or depletion of CD19-bearing leukocytes using the BD IMagnet™. CD19 is expressed during all stages of B-cell differentiation and maturation, except plasma cells. CD19 is also present on follicular dendritic cells. It is not found on T cells or on normal granulocytes. Peripheral Blood Mononuclear Cells (PBMC) are labeled with BD IMag™ anti-human CD19 Particles - DM according to the Magnetic Labeling Protocol. This labeled cell suspension is then placed within the magnetic field of the BD IMagnet™ (Cat. No. 552311). Labeled cells migrate toward the

Target Details

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.

Application Details

Protocol:

1. Prepare PBMC from anti-coagulated human blood, preferably by density gradient centrifugation using Ficoll-Paque™. 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). Store at 4°C.
3. Wash cells with an excess volume of 1X BD IMag™ buffer, and carefully aspirate all the supernatant.
4. Vortex the BD IMag™ anti-human CD19 Particles - DM thoroughly, and add 50 µl of particles for every 10⁷ total cells.
5. MIX THOROUGHLY. Incubate at room temperature for 30 minutes.
6. Bring the BD IMag™-particle labeling volume up to 1 - 8 x 10⁷ cells/ml with 1X BD IMag™ buffer, and immediately place the tube on the BD IMagnet™. Incubate for 8 - 10 minutes.
7. With the tube on the BD IMagnet™, carefully aspirate off the supernatant. This supernatant contains the negative fraction.
8. Remove the tube from the BD IMagnet™, and add 1X BD IMag™ buffer to the same volume as in step 6. Gently resuspend cells by pipetting up and down, and return the tube to the BD IMagnet™ for another 2 - 4 minutes.
9. With the tube on the BD IMagnet™, carefully aspirate off the supernatant and discard.
10. Repeat Steps 8 and 9.
11. After the final wash step, resuspend the positive fraction in an appropriate buffer or media, and proceed with desired downstream application(s). The concentration of BD IMag™ anti-human CD19 Particles - DM suggested in this protocol has been optimized for the purification of CD19 positive B lymphocytes from human peripheral blood. When labeling target cell populations present at lower frequencies, fewer BD IMag™ particles can be used. Conversely, when labeling target cell populations that are present at higher frequencies, more particles should be used. To determine the optimal concentration of the BD IMag™ anti-human CD19

Application Details

Particles - DM for a particular application, a titration in two-fold increments is recommended.
NOTE: Avoid nonspecific labeling by working quickly and keeping incubation times to a minimum.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: Aqueous buffered solution containing BSA and $\leq 0.09\%$ 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 3551520 Rev. 3

Publications

Product cited in: Bradbury, Goldmacher, Tedder: "The CD19 signal transduction complex of B lymphocytes. Deletion of the CD19 cytoplasmic domain alters signal transduction but not complex formation with TAPA-1 and Leu 13." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 151, Issue 6, pp. 2915-27, (1993) ([PubMed](#)).

Uckun, Muraguchi, Ledbetter, Kishimoto, OBrien, Roloff, Gajl-Peczalska, Provisor, Koller: "Biphenotypic leukemic lymphocyte precursors in CD2+CD19+ acute lymphoblastic leukemia and their putative normal counterparts in human fetal hematopoietic tissues." in: **Blood**, Vol. 73, Issue 4, pp. 1000-15, (1989) ([PubMed](#)).

Nadler, Anderson, Marti, Bates, Park, Daley, Schlossman: "B4, a human B lymphocyte-associated antigen expressed on normal, mitogen-activated, and malignant B lymphocytes." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 131, Issue 1, pp. 244-50, (1983) ([PubMed](#)).

Flow Cytometry

Image 1.

