

## TECHNICAL DATA SHEET 593

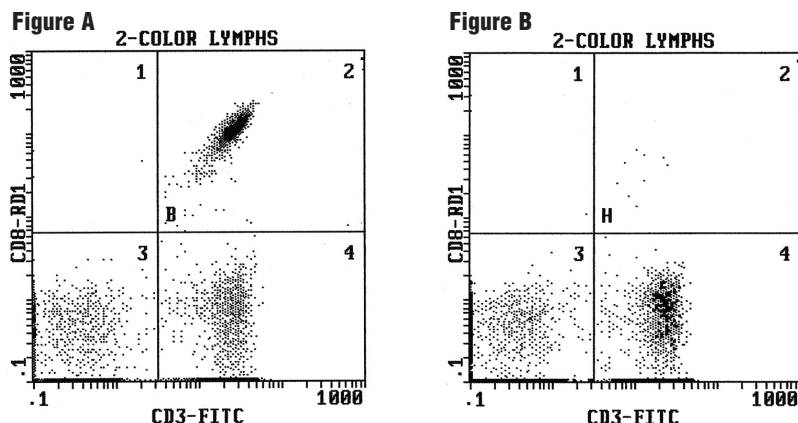
Page 1 of 2

# BioMag® SelectaPure™ anti-Mouse CD8a

### Description

CD8 antigen can exist as a homodimer of two alpha chains (CD8 $\alpha$ /Lyt-2), or as a CD8 alpha/beta heterodimer (CD8 $\alpha$ /Lyt-2, CD8 $\beta$ /Lyt-3). The heterodimer form is expressed on the surface of thymocytes and suppressor cytotoxic T lymphocytes. The homodimer form is expressed by a subset of intestinal intraepithelial lymphocytes.

BioMag SelectaPure anti-Mouse CD8a particles are designed for positive selection of CD8 plus mouse suppressor cytotoxic T cells. The antibody reacts with the CD8 $\beta$ /Lyt-3 differentiation antigen.



### General Recommendation\*

Concentration:	1.0 x 10 <sup>8</sup> particles/ml
Volume Used:	0.025ml
# Particles:	2.50 x 10 <sup>6</sup> per test
# Target Cells:	Approximately 2.4 x 10 <sup>5</sup> /ml
Particles:Target Cell:	10:1
Depletion:	97.6%

\*These values should be used as a starting point in optimizing experimental protocols. Due to differences in the distribution of cell types in samples and other variables, the researcher is strongly encouraged to determine the optimal particle to cell ratios for their experiments.

**Cell sorting results using BioMag SelectaPure anti-Mouse CD8a particles for positive selection.** Typically whole blood or purified leukocytes and particles are incubated for 30 minutes at room temperature and then magnetically separated. The supernatant is collected, incubated with the appropriate two-color antibody cocktail, and then analyzed by flow cytometry. Figure A depicts the cell population prior to positive selection. Figure B depicts the cell population after positive selection. The particle to cell ratios reported above are based on experiments where cells were exposed to the particles once.

### Characteristics

Mean Diameter: ~1.6 $\mu$ m  
Concentration: 1.0mg/ml  
Count: 1 x 10<sup>8</sup> particles/mg

### Procedure

Depending upon antigen availability and the size of the target cell population, cell sorting applications may require up to 50-60 magnetic particles per cell based on the target cell population. Magnetic particles and cells should be incubated at room temperature for 30 minutes to 1 hour in media containing 5-10% protein (to reduce non-specific binding) for successful separation. Gentle end-over-end or rocking during incubation is required for optimal results. (Note: Increasing the incubation time beyond one hour may be necessary to achieve the desired depletion.) Each researcher must optimize particle to cell ratio and incubation time for the application.

Some applications require the detachment of BioMag antibody particles from cells after separation. One approach would involve culturing cells after positive selection. Cultures can be maintained for about 48 hours during which magnetic particles fall away from cells due to cell surface changeover. The magnetic particles are then easily removed via a magnetic separation. Another approach is the use of a protease such as chymopapain to break the antigen-antibody bond and remove the particles magnetically. Depending upon the application, it may not be necessary to remove the cells from the BioMag particles. BioMag particles have been successfully used in FACS equipment. They will not jam the machine and are distinguishable from cells. Alternatively, negative selection approaches can be very effective in producing specific cell populations.

## Storage and Stability

The suspension is supplied in PBS/EDTA/1.0% BSA/0.1% sodium azide buffer at pH 7.5. Washing particles in sterile media to remove preservative prior to use is recommended. Store at 4°C. Freezing, drying, or centrifuging BioMag may result in irreversible aggregation or loss of binding activity.

## Safety

This particle suspension contains sodium azide. Sodium azide may react with lead and copper plumbing to form explosive metal azides. Upon disposal of material, flush with a large volume of water to prevent azide accumulation. Please consult the Material Safety Data Sheet for more information.

**This product is for research use only and is not intended for use in humans or for *in vitro* diagnostic use.**

## Ordering Information

Cat. #	Description	Size
85108	BioMag <sup>®</sup> SelectaPure <sup>™</sup> anti-Mouse CD8a	5ml

### To Order

In The U.S. Call: 1-800-523-2575 • 215-343-6484

In The U.S. FAX: 1-800-343-3291 • 215-343-0214

In Germany Call: (49) 6221-765767

In Germany FAX: (49) 6221-764620

Order online anytime at [www.polysciences.com](http://www.polysciences.com).