

# Monoclonal Anti-human Integrin $\beta$ 7-Phycoerythrin

Catalog Number: FAB4669P

Lot Number: ABEK02

100 Tests

## Reagents Provided

### Phycoerythrin (PE)-conjugated mouse monoclonal anti-human

**Integrin  $\beta$ 7:** Supplied as 25  $\mu$ g of antibody in 1 mL saline containing up to 0.5% BSA and 0.1% sodium azide.

**Clone #:** 473207

**Isotype:** mouse IgG<sub>1</sub>

## Reagents Not Provided

- Flow Cytometry Staining Buffer (Catalog # FC001) or other BSA-supplemented saline buffer.

## Storage

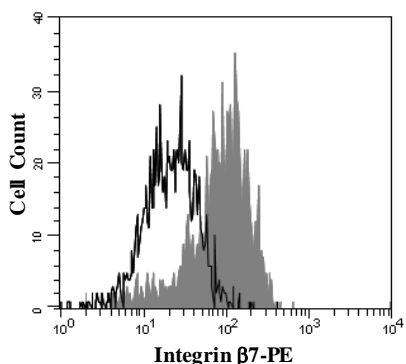
Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2° - 8° C.

## Intended Use

Designed to quantitatively determine the percentage of cells bearing Integrin  $\beta$ 7 within a population and qualitatively determine the density of Integrin  $\beta$ 7 on cell surfaces by flow cytometry.

## Product Description

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse/rat immunized with purified, CHO-derived, recombinant human Integrin  $\beta$ 7 (rhIntegrin  $\beta$ 7; aa 20 - 723; Accession # P26010). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. The purified antibody was then conjugated to PE fluorochrome. Cell surface expression of Integrin  $\beta$ 7 is determined by flow cytometry using 488 nm wavelength excitation and monitoring emitted fluorescence with a detector optimized to collect peak emissions at 565 - 605 nm.



PBMC lymphocytes were stained with PE-conjugated anti-human Integrin  $\beta$ 7 (Catalog # FAB4669P, filled histogram) or isotype control (Catalog # IC002P, open histogram).

## Background Information

Human Integrin  $\beta$ 7 (also Integrin  $\beta$ P and M290 IEL Ag) is a 120 kDa member of the Integrin beta chain family of molecules. It is a type I transmembrane glycoprotein that contains a 704 amino acid (aa) extracellular domain (ECD; aa 20 - 723) and a 52 aa cytoplasmic tail. The ECD contains one von Willebrand factor A domain (aa 150 - 389) and four cysteine-rich EGF-like repeats. One splice variant exists that shows a deletion of aa 501 - 648. Integrin  $\beta$ 7 forms a nondisulfide linked heterodimer with  $\alpha$ 4 and  $\alpha$ E integrins. Integrin  $\alpha$ 4 $\beta$ 7 binds to fibronectin, VCAM-1, and MADCAM1, while Integrin  $\alpha$ E $\beta$ 7 binds to E-cadherin. The ECD of human  $\beta$ 7 is 87% aa identical to the ECD of mouse  $\beta$ 7.

## Flow Cytometry Validation

This antibody has been tested for flow cytometry using PBMC lymphocytes.

- Cells may be Fc-blocked with 1  $\mu$ g of human IgG/10<sup>5</sup> cells for 15 minutes at room temperature. Do not wash excess blocking IgG from this reaction.
- After blocking, 10  $\mu$ L of conjugated antibody was added to up to 1 x 10<sup>6</sup> cells and incubated for 30 minutes at room temperature.
- Unbound antibody was removed by washing the cells twice in Flow Cytometry Staining Buffer (Catalog # FC001). Note that whole blood requires a RBC lysis step at this point using Flow Cytometry Human Lyse Buffer (Catalog # FC002).
- The cells were resuspended in Flow Cytometry Staining Buffer for final flow cytometric analysis. As a control for this analysis, cells in a separate tube should be treated with PE-labeled mouse IgG<sub>1</sub> antibody. This procedure may need to be modified, depending upon the cell type and final utilization. Individual users may need to titrate to determine the optimal reagent amount for their specific use.

**Warning:** Contains sodium azide as a preservative - sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.