Monoclonal Anti-mouse VCAM-1/CD106-PE

Catalog Number: FAB6432P
Lot Number: ABAM01
100 Tests

Reagents Provided

Phycoerythrin (PE)-conjugated rat monoclonal anti-mouse VCAM-1/CD106: Supplied as 25 μg of antibody in 1 mL saline containing up to 0.5% BSA and 0.1% sodium azide.

Clone #: 112734

Isotype: rat IgG_{2A}

Reagents Not Provided

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

Storage

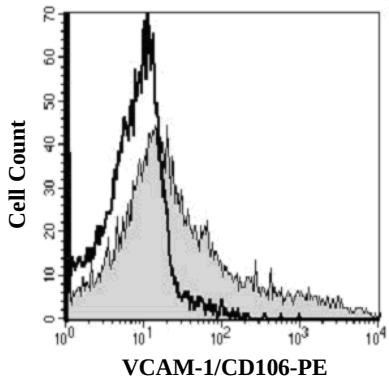
Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2° - 8° C.

Intended Use

Designed to quantitatively determine the percentage of cells bearing VCAM-1/CD106 within a population and qualitatively determine the density of VCAM-1/CD106 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 rat immunized with purified, NS0-derived, recombinant mouse vascular cell adhesion molecule 1 (rmVCAM-1). 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 VCAM-1/CD106 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.



Mouse bone marrow cells were stained with PE-conjugated anti-mouse VCAM-1/CD106 (Catalog # FAB6432P, filled histogram) or isotype control (Catalog # IC006P, open histogram).

Background Information

Human Vascular Cell Adhesion Molecule-1 (VCAM-1/CD106) is a 100 - 110 kDa, 715 amino acid, type I transmembrane glycoprotein.[1 - 3] A number of variants of human VCAM-1 occur as a result of alternate gene splicing.[1] Moreover, a soluble form of VCAM-1 has been identified in culture supernatants,[4] blood,[5 - 7] and cerebrospinal fluid.[7, 8] Various proteases, including MMPs, neutrophil elastase, and cathepsin B have been implicated in the shedding of transmembrane VCAM-1.[9, 10]

References

1. Osborn, L. *et al*. (1989) Cell **59**:1203.
2. Cybulsky, M.I. *et al*. (1991) Proc. Natl. Acad. Sci. USA **88**:7859.
3. Hession, C. *et al*. (1991) J. Biol. Chem. **266**:6682.
4. Pigott, R. *et al*. (1992) Biochem. Biophys. Res. Comm. **187**:584.
5. Duits, A.J. *et al*. (1996) Clin. Immunol. Immunopathol. **81**:96.
6. Sudhoff, T. *et al*. (1996) Leukemia **10**:682.
7. Matsuda, M. *et al*. (1995) J. Neuroimmunol. **59**:35.
8. Droogan, A.G. *et al*. (1996) J. Neuroimmunol. **64**:185.
9. Hummel, V. *et al*. (2001) J. Neuropathol. Exp. Neurol. **60**:320.
10. Cybulsky, M.I. *et al*. (2001) J. Clin. Invest. **107**:1255.

Flow Cytometry Validation

This antibody has been tested for flow cytometry using mouse bone marrow cells.

1. Cells may be Fc-blocked with 1 μg of mouse IgG/10^5 cells for 15 minutes at room temperature. Do not wash excess blocking IgG from this reaction.
2. After blocking, 10 μL of conjugated antibody was added to 1 - 2.5 x 10^5 cells and incubated for 30 minutes at room temperature.
3. 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 Mouse Lyse Buffer (Catalog # FC003).
4. 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 rat IgG_{2A} antibody. This procedure may need to be modified, depending upon cell type and final utilization. Individual users may need to titrate to determine 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.

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