Monoclonal Anti-mouse CD97v2-Alexa Fluor® 488

Catalog Number: FAB3734G
Lot Number: ADKW01
100 Tests

Reagents Provided

Alexa Fluor® 488-conjugated rat monoclonal anti-mouse CD97v2: Supplied as 10 µg of antibody in 0.5 mL saline containing up to 0.5% BSA and 0.09% sodium azide.

Clone #: 587702

Isotype: rat IgG_1

Reagents Not Provided

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

Storage

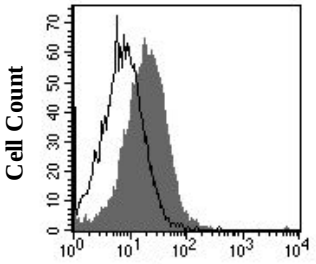
Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2-8° C.

Intended Use

Designed to quantitatively determine the percentage of cells bearing CD97v2 within a population and qualitatively determine the density of CD97v2 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 CHO cell-derived recombinant mouse CD97v2 (rmCD97v2; aa 1-384; Accession # AAH06676). The IgG fraction of the tissue culture supernatant was purified by Protein A or G affinity chromatography. The purified antibody was then conjugated to Alexa Fluor® 488 fluorochrome. Cell surface expression of CD97v2 is determined by flow cytometry using 488 nm wavelength excitation and monitoring emitted fluorescence with a detector optimized to collect peak emissions at 515-545 nm.



CD97v2-Alexa Fluor® 488

Mouse splenocytes were stained with Alexa Fluor® 488-conjugated anti-mouse CD97v2 (Catalog # FAB3734G; filled histogram) or Alexa Fluor® 488-conjugated isotype control (Catalog # IC005G; open histogram).

Background Information

CD97 is a member of the LNBTM7 protein family, which is a subfamily of the G protein-coupled receptor 2 family.[1-3] Three isoforms of CD97 are produced by alternative splicing in mouse.[4,5] Cells known to express CD97 include monocytes, macrophages, T cells, select B cells, dendritic cells, and potentially vascular and visceral smooth muscle cells.[1,6,7] CD97 is also differentially expressed on murine hematopoietic stem and progenitor cells.[7] It has been demonstrated that CD97 is required for neutrophil migration and host defense.[8]

References

1. McKnight, A.J. & S. Gordon (1998) J Leukoc. Biol. **63**:271.
2. Stacey, M. *et al.* (2000) Trends Biochem. Sci. **25**:284.
3. Stacey, M. *et al.* (2003) Blood **102**:2916.
4. Hamann, J. *et al.* (2000) Int. Immunol. **12**:439.
5. Qian, Y.M. *et al.* (1999) Immunology **98**:303.
6. Jaspars, L.H. *et al.* (2001) Tissue Antigens **57**:325.
7. Van Pel, M. *et al.* (2008) Haematologica **93**:1137.
8. Leemans, J.C. *et al.* (2004) J. Immunol. **172**:1125.

Flow Cytometry Validation

This antibody has been tested for flow cytometry using mouse splenocytes.

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, 5 µL of conjugated antibody was added to up to 1 x 10^6 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 Alexa Fluor® 488-labeled rat IgG_1 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.

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