invitrogen™ | MOLECULAR PROBES®

PRODUCT INSERT

RAT anti-MOUSE CD34

Product Code	Form	Volume	Antibody*	Excitation (nm)	Peak Emission (nm)	Matching Isotype Controls	
RM3604	R-PE	0.5 ml	50 µg	488	575	Rat IgG2a R-PE	Code R2a04
RM3604-3	R-PE	3.0 ml	300 µg				

PRODUCT DESCRIPTION

Rat monoclonal antibody to mouse CD34

Clone: MEC 14.7

Isotype: Rat IgG2a

Immunogen: t-end.1, a polyoma Middle T oncogene (pMT) transformed EC line[1]

Lot No.: See label **Expiration:** See label

Buffer: Phosphate buffered saline (PBS)

Preservatives: 0.1% ***sodium azide.*** Sodium azide is an extremely toxic and dangerous compound particularly when combined with acids or metals. Solutions containing sodium azide should be disposed of properly.

Stabilizer: A highly purified grade of BSA has been added as a stabilizing protein.

STORAGE & HANDLING

Store reagents at 2-8°C. Light exposure should be avoided. Use dim light during handling, incubation with cells and prior to analysis. It is recommended that cells be analyzed within 18 hours of staining. If the reagent is being diluted, it is recommended that only the quantity to be used within one week be diluted.

PRODUCT CHARACTERIZATION

Antigen Specificity: The MEC 14.7 monoclonal antibody (mAb) reacts with a neuraminidase-sensitive epitope of the CD34 antigen. CD34 antigen, a membrane glycophosphoprotein, is expressed by endothelial cells (EC), particularly small vessel EC, and hematopoietic progenitor cells[1]. A sulfated form of CD34 is one of the leukocyte L-selectin counterligands and participates in leukocyte adhesion and homing during the inflammatory process[1]. Although CD34 is often used as a marker for the selection and delineation of hematopoietic progenitor cells from bone marrow, MEC 14.7 mAb is not recommended for this purpose as it does not stain as many bone marrow cells (<1%) as other mouse CD34 mAbs. This staining difference is likely due to differences in the glycosylated epitope recognized by each mAb. Applications for the MEC 14.7 mAb include immunostaining for flow cytometry, Western blotting, immunoprecipatation, immunofluorescence microscopy, and immunohistochemistry on frozen sections[1].

PRODUCT QUALITY CONTROL

Every lot is tested by flow cytometry using freshly harvested mouse splenocytes (as a negative control) and the WEHI-164 mouse fibrosarcoma cell line. From this testing it is recommended that between 0.1 and 0.25 µg of antibody be used per 1 x 10^6 cells in a 100 µl staining volume. Because conditions may vary, it is recommended that each investigator determine the optimal amount of antibody to be used for each application.

REFERENCES:

1. Garlanda, C., R. Berthier, J. Garin, A. Stoppaccidro, L. Rucco, D. Vittet, D. Gulino, C. Matteucci, A. Mantovani, A. Vecchi, and E. Dejana. 1997. *Eur. J. Cell Biol.* 73: 368-377.

* The amount of antibody is determined by measuring the optical density using a spectrophotometer. The antibody titer is verified by immunofluorescent staining and flow cytometric analysis.

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