

## Technical Data Sheet

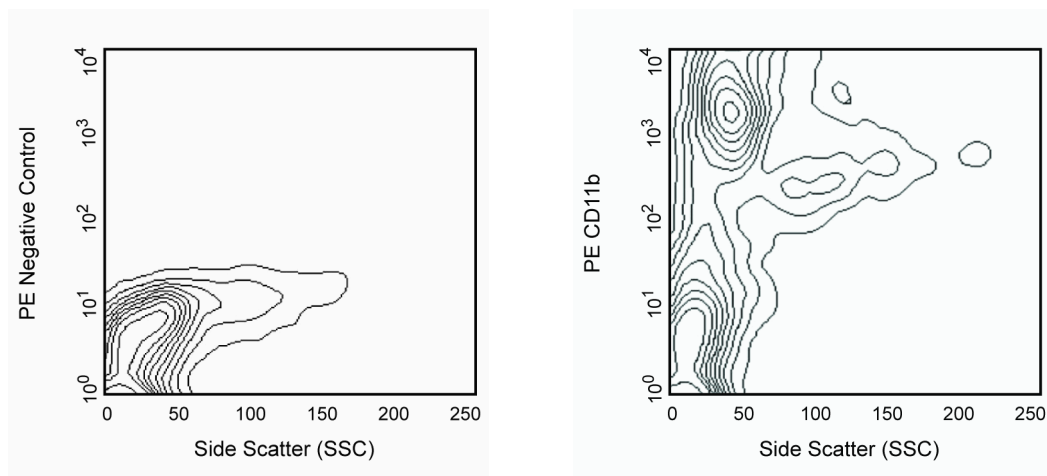
## PE Rat Anti-CD11b

## Product Information

<b>Material Number:</b>	<b>557397</b>
<b>Alternate Name:</b>	Itgam; Integrin alpha-M; Ly-40; Mac-1a; Mac-1 alpha; CR3A; CR-3 alpha chain
<b>Size:</b>	0.1 mg
<b>Concentration:</b>	0.2 mg/ml
<b>Clone:</b>	M1/70
<b>Immunogen:</b>	Mouse Splenic Cells
<b>Isotype:</b>	Rat (DA) IgG2b, $\kappa$
<b>Reactivity:</b>	QC Testing: Mouse Tested in Development: Human
<b>Storage Buffer:</b>	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

## Description

The M1/70 monoclonal antibody specifically binds to CD11b, also known as Integrin alpha M (Itgam or  $\alpha$ M). CD11b is a 170-kDa type 1 transmembrane glycoprotein and belongs to the Integrin alpha chain family. CD11b serves as the alpha chain of the heterodimeric Mac-1 integrin (CD11b/CD18,  $\alpha$ M $\beta$ 2), also known as complement receptor 3 (CR3). Mac-1 mediates adhesion to ICAM-1 (CD54), ICAM-2 (CD102), fibrinogen and binding to C3bi. Mac-1 is expressed at varying levels on granulocytes, macrophages, myeloid-derived dendritic cells, natural killer cells, microglia, and B-1 B lymphocytes. Mac-1 expression is rapidly upregulated on neutrophils after activation, in the same time period that CD62L (L-selectin) is shed from the cell surface. The M1/70 antibody reportedly blocks cell adherence and C3bi binding but does not block cell-mediated lysis. Cross-reaction of the M1/70 antibody with CD11b expressed on human monocytes, polymorphonuclear leukocytes, and NK cells has been reported.



**Expression of CD11b on bone-marrow myeloid cells.** BALB/c bone-marrow leukocytes were either unstained (left panel) or stained with PE Rat Anti-CD11b (Cat. No. 553311/557397/561689, right panel). Please note that the population of cells having the lowest SSC (erythroid and lymphoid cells) show little expression of CD11b, while cells with moderate-to-high SSC (myeloid cells) are mostly CD11b positive (right panel). Flow cytometry was performed on a BD FACScan™ flow cytometry system.

## Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

## Application Notes

## Application

Flow cytometry	Routinely Tested
----------------	------------------

## BD Biosciences

bdbiosciences.com

United States 877.232.8995 Canada 866.979.9408 Europe 32.2.400.98.95 Japan 0120.8555.90 Asia Pacific 65.6861.0633 Latin America/Caribbean 55.11.5185.9995

For country contact information, visit [bdbiosciences.com/contact](http://bdbiosciences.com/contact)

*Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.*

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.  
© 2017 BD. BD, the BD Logo and all other trademarks are property of Becton, Dickinson and Company.



## Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
553989	PE Rat IgG2b, $\kappa$ Isotype Control	0.1 mg	A95-1
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
553311	PE Rat Anti-CD11b	0.2 mg	M1/70
561689	PE Rat Anti-CD11b	25 $\mu$ g	M1/70

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
5. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
6. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.

## References

- Ault KA, Springer TA. Cross-reaction of a rat-anti-mouse phagocyte-specific monoclonal antibody (anti-Mac-1) with human monocytes and natural killer cells. *J Immunol.* 1981; 126(1):359-364. (Clone-specific)
- Beller DI, Springer TA, Schreiber RD. Anti-Mac-1 selectively inhibits the mouse and human type three complement receptor. *J Exp Med.* 1982; 156(4):1000-1009. (Biology: Blocking)
- Kishimoto TK, Jutila MA, Berg EL, Butcher EC. Neutrophil Mac-1 and MEL-14 adhesion proteins inversely regulated by chemotactic factors. *Science.* 1989; 245(4923):1238-1241. (Biology)
- Lagasse E, Weissman IL. Flow cytometric identification of murine neutrophils and monocytes. *J Immunol Methods.* 1996; 197(1-2):139-150. (Methodology: Flow cytometry)
- Lub M, van Kooyk Y, Figdor CG. Competition between lymphocyte function-associated antigen 1 (CD11a/CD18) and Mac-1 (CD11b/CD18) for binding to intercellular adhesion molecule-1 (CD54). *J Leukoc Biol.* 1996; 59(5):648-655. (Biology: Immunoprecipitation)
- Sanchez-Madrid F, Simon P, Thompson S, Springer TA. Mapping of antigenic and functional epitopes on the alpha- and beta-subunits of two related mouse glycoproteins involved in cell interactions, LFA-1 and Mac-1. *J Exp Med.* 1983; 158(2):586-602. (Biology: Blocking, Immunoprecipitation, Western blot)
- Springer T, Galfre G, Secher DS, Milstein C. Monoclonal xenogeneic antibodies to murine cell surface antigens: identification of novel leukocyte differentiation antigens. *Eur J Immunol.* 1978; 8(8):539-551. (Immunogen: Immunoprecipitation)
- Springer T, Galfre G, Secher DS, Milstein C. Mac-1: a macrophage differentiation antigen identified by monoclonal antibody. *Eur J Immunol.* 1979; 9(4):301-306. (Clone-specific: Immunoprecipitation)
- Springer TA, Davignon D, Ho MK, Kurzinger K, Martz E, Sanchez-Madrid F. LFA-1 and Lyt-2,3, molecules associated with T lymphocyte-mediated killing; and Mac-1, an LFA-1 homologue associated with complement receptor function. *Immunol Rev.* 1982; 68:171-195. (Biology: Blocking)