

Technical Data Sheet

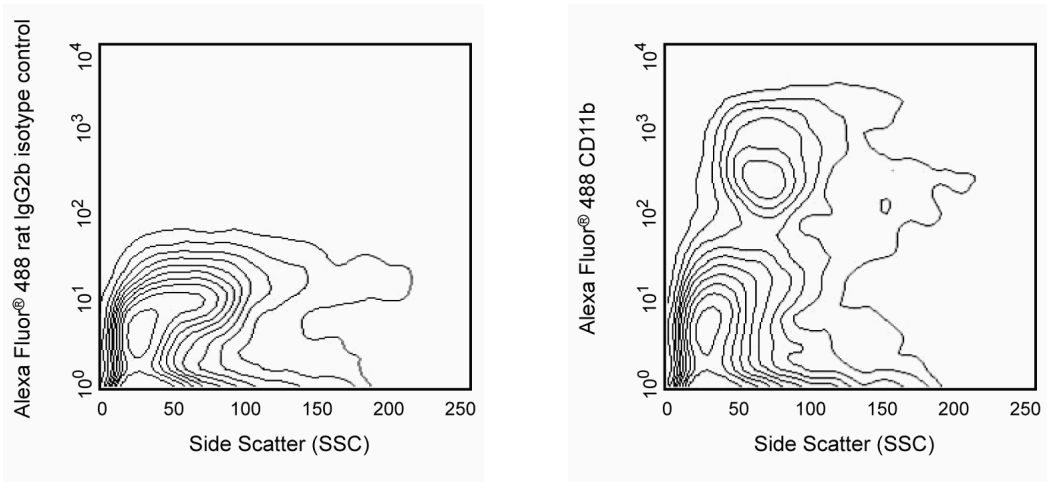
Alexa Fluor® 488 Rat Anti-Mouse CD11b

Product Information

Material Number:	557672
Alternate Name:	Itgam; Integrin alpha-M; Ly-40; Mac-1a; Mac-1 alpha; CR3A; CR-3 alpha chain
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	M1/70
Immunogen:	Mouse Splenic Cells
Isotype:	Rat (DA) IgG2b, κ
Reactivity:	QC Testing: Mouse Reported: Human
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The M1/70 monoclonal antibody specifically binds to CD11b, also known as Integrin alpha M (Itgam or αM). CD11b is a 170-kDa type 1 transmembrane glycoprotein and belongs to the Integrin alpha chain family. C11b serves as the alpha chain of the heterodimeric Mac-1 integrin (CD11b/CD18, αMβ2), 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 up-regulated 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. C57BL/6 bone-marrow leukocytes were stained with either Alexa Fluor® 488-conjugated Rat IgG2b, κ isotype control mAb (Cat. No. 557726, left panel) or Alexa Fluor® 488-conjugated mAb M1/70 (Cat. No. 557672, 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 almost uniformly CD11b positive (right panel). Flow cytometry was performed on a BD FACSCalibur™ 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 to Alexa Fluor® 488 under optimum conditions, and unreacted Alexa Fluor® 488 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
557726	Alexa Fluor® 488 Rat IgG2b, κ Isotype Control	0.1 mg	A95-1
554656	Stain Buffer (FBS)	500 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Alexa Fluor® 488 fluorochrome emission is collected at the same instrument settings as for fluorescein isothiocyanate (FITC).
3. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
5. 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.
6. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
7. An isotype control should be used at the same concentration as the antibody of interest.
8. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.

References

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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)

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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)

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