Anti-Mouse CD11b Antibody, Clone M1/70, Alexa Fluor® 488

Antibodies

Rat monoclonal IgG2b antibody against human, mouse, rhesus CD11b, Alexa Fluor® 488-conjugated

STEMCELL TECHNOLOGIES™

Scientists Helping Scientists™ | WWW.STEMCELL.COM

T. +1 604 877 0713 • TOLL-FREE T. 1 800 667 0322
ORDERS@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Catalog	#60001AD.1	25 µg	0.5 mg/mL
	#60001AD	100 µg	0.5 mg/mL

FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.

Product Description

The M1/70 antibody reacts with CD11b, an ~170 kDa type 1 transmembrane glycoprotein which associates non-covalently with CD18 to form the heterodimeric Mac-1 receptor. Through its interactions with ligands such as ICAM-1 (CD54), ICAM-2 (CD102), ICAM-4 (CD242), iC3b, and fibrinogen, Mac-1 functions in several processes, including the adherence of neutrophils and monocytes to stimulated endothelium and phagocytosis of complement-coated particles. CD11b is expressed on the surface of granulocytes, monocytes, NK cells, dendritic cells, tissue macrophages and subsets of T and B cells, and has been used as a marker to distinguish naive and memory CD8+ T cells. CD11b is a relatively late marker for myeloid differentiation and is undetectable on most myelomonocytic hematopoietic progenitor cells and more primitive cells. The M1/70 antibody reportedly blocks iC3b binding to Mac-1.

Target Antigen Name:	CD11b
Alternative Names:	alphaM integrin, Mac-1, Mo1, CR3, Ly-40, C3biR
Gene ID:	16409
Species Reactivity:	Human, Mouse, Rhesus, Cynomolgus, Baboon, Chimpanzee, Rabbit
Host Species:	Rat
Clonality:	Monoclonal
Clone:	M1/70
Isotype:	IgG2b, kappa
Immunogen:	C57BL/10 mouse splenocytes
Conjugate:	Alexa Fluor® 488

Applications

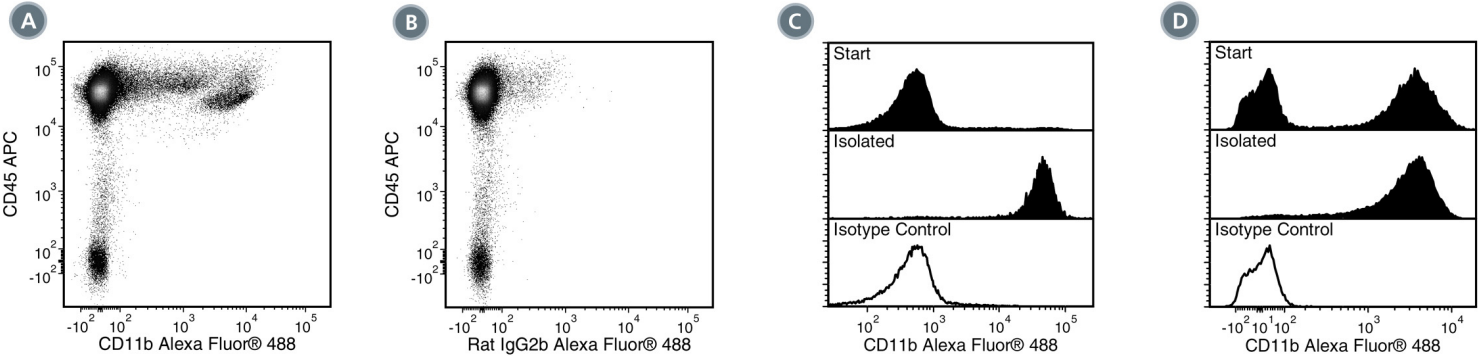|	
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Mouse Monocyte Enrichment Kit (Catalog #19761).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 488.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please request a lot-specific Certificate of Analysis from techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is ≤0.25 µg per 1 x 10e6 cells in 100 µL volume. It is recommended that the antibody be titrated for optimal performance for each application.

Data

(A) Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with Anti-Mouse CD11b Antibody, Clone M1/70, Alexa Fluor® 488 and anti-mouse CD45 APC.

(B) Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with a rat IgG2b, kappa Alexa Fluor® 488 isotype control antibody and anti-mouse CD45 APC.

(C) Flow cytometry analysis of C57BL/6 mouse splenocytes processed with the EasySep™ Mouse Monocyte Enrichment Kit and labeled with Anti-Mouse CD11b Antibody, Clone M1/70, Alexa Fluor® 488. Histograms show labeling of splenocytes (Start) and isolated cells (Isolated). Labeling of start cells with a rat IgG2b, kappa Alexa Fluor® 488 isotype control antibody is shown in the bottom panel (open histogram).

(D) Flow cytometry analysis of C57BL/6 mouse bone marrow cells processed with the EasySep™ Mouse Monocyte Enrichment Kit and labeled with Anti-Mouse CD11b Antibody, Clone M1/70, Alexa Fluor® 488. Histograms show labeling of bone marrow cells (Start) and isolated cells (Isolated). Labeling of start cells with a rat IgG2b, kappa Alexa Fluor® 488 isotype control antibody is shown in the bottom panel (open histogram).

Related Products

PRODUCT NAME	CATALOG #	SIZE
Anti-Mouse CD11b Antibody, Clone M1/70	60001	Coming soon
Anti-Mouse CD11b Antibody, Clone M1/70, PE	60001PE.1	50 µg
Anti-Mouse CD11b Antibody, Clone M1/70, PE	60001PE	200 µg
Anti-Mouse CD11b Antibody, Clone M1/70, Alexa Fluor® 488	60001AD.1	25 µg
Anti-Mouse CD11b Antibody, Clone M1/70, Alexa Fluor® 488	60001AD	100 µg

References

1. Springer T, et al. Monoclonal xenogeneic antibodies to murine cell surface antigens: identification of novel leukocyte differentiation antigens. Eur J Immunol 8(8): 539-51, 1978 (IP)

2. SpringerT, et al. Mac-1: a macrophage differentiation antigen identified by monoclonal antibody. Eur J Immunol 9(4): 301-06, 1979

3. 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 126(1): 359-64, 1981 (FA)

4. Beller DI, et al. Anti-Mac1 selectively inhibits the mouse and human type three complement receptor. J Exp Med 156(4): 1000-09, 1982 (FA)

5. Sanchez-Madrid F, et al. 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 158(2): 586-602, 1983

6. Noel GJ, et al. Role of complement in mouse macrophage binding of Haemophilus influenzae type b. J Clin Invest 85(1): 208-18, 1990 (IF)

7. Iwasaki A, Kelsall BL. Unique functions of CD11b+, CD8 alpha+, and double-negative Peyer's patch dendritic cells. J Immunol 166(8): 4884-90, 2001 (FC, IHC)

8. Tailleux L, et al. DC-SIGN is the major Mycobacterium tuberculosis receptor on human dendritic cells. J Exp Med 197(1): 121-27, 2003 (FA, FC)

9. Dzhagalov I, et al. The anti-apoptotic protein Mcl-1 is essential for the survival of neutrophils but not macrophages. Blood 109(4): 1620-26, 2007 (FC)

10. Norian LA, et al. Tumor-infiltrating regulatory dendritic cells inhibit CD8+ T cell function via L-arginine metabolism. Cancer Res 69(7): 3086-94, 2009 (FC)

11. Baumgartner CK, et al. Peptide-MHC class II complex stability governs CD4 T cell clonal selection. J Immunol 184(2): 573-81, 2010

12. Charles N, et al. Basophils and the T helper 2 environment can promote the development of lupus nephritis. Nat Med 16(6): 701-07, 2010 (FC)