ALPHA DIAGNOSTIC INTERNATIONAL

Life Technologies™ Your Molecular & Cell Technology Partner

Product Data Sheet

Mouse CD11b (MAC-1) Antibodies and Conjugates

□ **Cat#** MCD011B-**M**	Rat Anti-Mouse CD11b (MAC-1) IgG, Unlabeled	**Size**: 100 tests
□ **Cat#** MCD011B-**F**	Rat Anti-Mouse CD11b (MAC-1) IgG-FITC Conjugate	**Size**: 100 tests
□ **Cat#** MCD011B-**B**	Rat Anti-Mouse CD11b (MAC-1) IgG-Biotin Conjugate	**Size**: 100 tests
□ **Cat#** MCD011B-**PE**	Rat Anti-Mouse CD11b (MAC-1) IgG-PE Conjugate	**Size**: 100 tests

Integrin alpha M (ITGAM) is one protein subunit that forms the heterodimeric integrin alpha-M beta-2 (αMβ2) molecule, also known as macrophage-1 antgen (Mac-1) or complement receptor 3 (CR3).[1] ITGAM is also known as CR3A, and cluster of differentiation molecule 11B (CD11B). The second chain of αMβ2 is the common integrin β2 subunit known as CD18, and integrin αMβ2 thus belongs to the β2 subfamily (or leukocyte) integrins.[2]

αMβ2 is expressed on the surface of many leukocytes involved in the innate immune system, including monocytes, granulocytes, macrophages, and natural killer cells. It mediates inflammation by regulating leukocyte adhesion and migration and has been implicated in several immune processes such as phagocytosis, cell-mediated cytotoxicity, chemotaxis and cellular activation. It is involved in the complement system due to its capacity to bind inactivated complement component 3b (iC3b). The ITGAM (alpha) subunit of integrin αMβ2 is directly involved in causing the adhesion and spreading of cells but cannot mediate cellular migration without the presence of the β2 (CD18) subunit. In genome wide association studies, single nucleotide polymorphisms in ITGAM had the strongest association with systemic lupus erythematosus, with an odds ratio of 1.65 for the T allele of rs9888739 and lupus.

Rat anti-mouse CD11b (Mac-1; Ly 40) monoclonal antibody is specific for the 170 kDa α subunit of Mac-1 which mediates adhesion to ICAM-1 (CD54) and C3bi. This particular clone blocks cell adherence and C3bi binding but does not block cell medited lysis.

The antibody is produced in rat (IgG2b). It is purified by Protein A/G and coupled to Biotin, APC, FITC, PE, Cy5 etc).

Matching rat isotype (IgG2a) Controls

Catalog#	ProdDescription
20005-13	Rat IgG2b unconjuagted (isotype control)
20005-13-B	Rat IgG2b-Biotin conjugate (isotype control)
20005-13-F	Rat IgG2b-FITC conjugate (isotype control)
20005-13-HP	Rat IgG2b-HRP conjugate (isotype control)
20005-13-PC5	Rat IgG2b-R-PE-Cy5.5 conj. (isotype control)
20005-13-PE	Rat IgG2b-R-PE conjugate (isotype control)

Cat# MCD011B-M, unlabeled

The antibody is supplied in PBS, pH 7.4, in either **lyophilized** (100 tests) or **liquid** form (lot specific volume indicated on the vial). Reconstitute powder in water. Store at -2-4oC. Stability is ~6-12 months. Do not freeze and thaw.

Cat# MCD011B-F, FITC-conjugate

Purified antibody was coupled to FITC at F/P ratio ~5. The antibody is supplied in PBS, pH 7.4, 1% BSA, 0.05% azide (see lot sp concn on the vial) or in powder form. **Reconstitute** powder in PBS. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze/thaw.

Suggested conjugate dilutions are 1:20-1:500 for immunofluorescence. Or 1 test equivalent of antibody per million cells.
Absorption @495 nm **Emission** @528 nm

Cat# MCD011B-B, Biotin-conjugate

Purified antibody was coupled to Biotin using Biotinamidocaproate N-Hydroxysuccinimide Ester (BAC) at F/P ratio ~10-20:1. The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** or **liquid** form (or see lot sp. conc on the vial). Reconstitute powder in PBS in 0.1 ml to prepare stock solution. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:5,000-1:30,000 ELISA, 1:2K-1:10K for western.

Cat# MCD011B-PE, PE-conjugate

The purified antibody was coupled to R-Phycoerythrin (R-PE) (Molecular Weight 240,000 daltons) from seaweed using proprietary methods (A565nm/A280nm ~3-4).

Absorption: 490 nm, 545 nm and 565 nm
Emission Wavelength: 580 nm

The conjugate is provided in PBS, pH 7.5, containing 0.1% bovine serum albumin, (BSA) 0.05% sodium azide and stabilizing agent). DO NOT FREEZE. The product should be stored at 4oC and is stable for a minimum of 1 year. Do not store diluted solutions.

Recommended usage is ~10 ul/106 cells for Flow cytometry or FACS. Due to many experimental variations, optimum concn must be determined for a given applications

Recommended Working Dilution

Working dilution for the specific application should be determined by the investigator to obtain the best conditions and prepared immediately before use. Diluted solution should be discarded. This product can be used in immunodiffusion, ELISA, flow cytometry, immunofluorescence or immunolocalization.
SasakI KT (1987) Cytometry 8, 413; Springer TA (1981) JBC 256, 3833; SaadA A (1996) JCB 133, 159; Cua DJ (1995) Eur. J. Immmunol. 25, 2318-2324;
Refs: .

MCD011B 130904A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com