

Technical Data Sheet

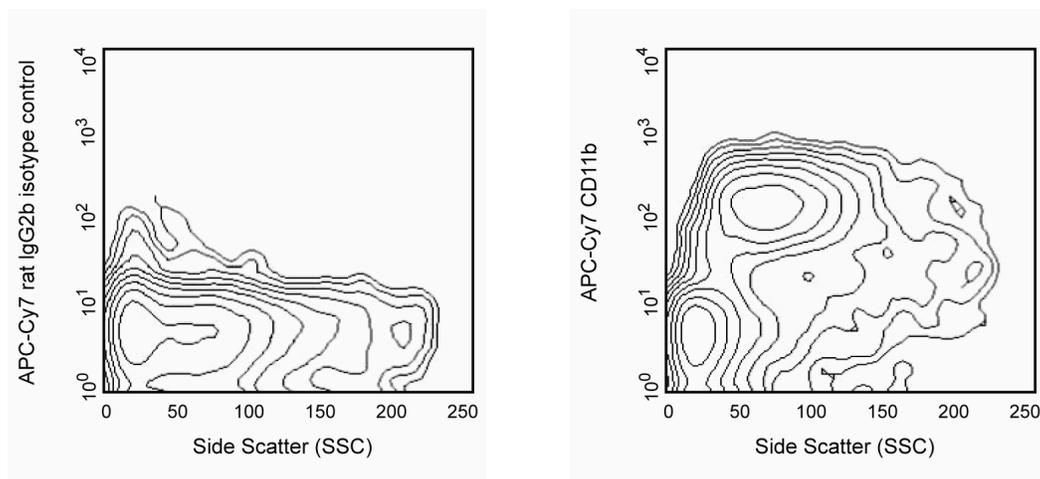
APC-Cy7™7 Rat Anti-CD11b

Product Information

Material Number:	557657
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 Tested in Development: 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. CD11b 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 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. C57Bl/6 bone-marrow leukocytes were stained with either APC-Cy7™7 Rat IgG2b κ Isotype Control (Cat. No. 552773, left panel) or APC-Cy7™7 Rat Anti-Mouse CD11b (Cat. No. 561039/557657, 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 FACSVantage™ SE 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 APC-Cy7 under optimum conditions, and unconjugated antibody and free APC-Cy7 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
552773	APC-Cy TM 7 Rat IgG2b κ Isotype Control	0.1 mg	A95-1
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
561039	APC-Cy TM 7 Rat Anti-CD11b	25 μ 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. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. APC-Cy7 tandem fluorochrome emission is collected in a detector for fluorescence wavelengths of 750 nm and higher.
7. APC-Cy7 is a tandem fluorochrome composed of Allophycocyanin (APC), which is excited by laser lines between 595 and 647 nm and serves as an energy donor, coupled to the cyanine dye Cy7TM, which acts as an energy acceptor and fluoresces at 780 nm. BD Biosciences Pharmingen has maximized the fluorochrome energy transfer in APC-Cy7, thus maximizing its fluorescence emission intensity, minimizing residual emission from APC, and minimizing required electronic compensation in multilaser-laser flow cytometry systems. Note: Although every effort is made to minimize the lot-to-lot variation in residual emission from APC, it is strongly recommended that every lot be tested for differences in the amount of compensation required and that individual compensation controls are run for each APC-Cy7 conjugate.
8. Warning: Some APC-Cy7 and PE-Cy7 conjugates show changes in their emission spectrum with prolonged exposure to formaldehyde. If you are unable to analyze fixed samples within four hours, we recommend that you use BDTM Stabilizing Fixative (Cat. No. 338036).
9. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
10. Cy is a trademark of GE Healthcare.
11. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

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