Technical Data Sheet

Purified Rat Anti-Mouse CD51

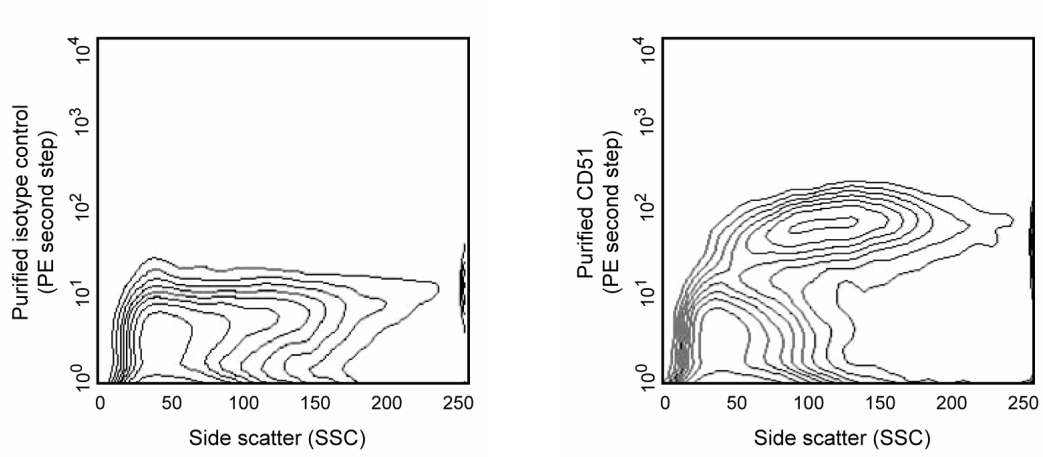
Product Information

Material Number:	**550024**
Alternate Name:	Integrin αV chain
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	RMV-7
Immunogen:	Mouse (BALB/c) IL-2-activated killer (LAK) Cells
Isotype:	Rat (SD) IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The rat anti-mouse CD51 (clone RMV-7) antibody reacts with the 140 kDa integrin αV chain. Heterodimers of CD51 with several integrin β chains function as receptors for extracellular matrix proteins. CD51/CD61 (αVβ3 integrin, vitronectin receptor) mediates adhesion to fibronectin, fibrinogen, vitronectin, thrombospondin, von Willebrand factor, and CD31 (PECAM-1). It has been reported to be expressed on activated T lymphocytes, polymorphonuclear granulocytes, blastocysts, and osteoclasts. CD51 has reportedly been found to be undetectable on mouse platelets using either antibody clones H9.2B8 or RMV-7. CD51 also forms heterodimers with CD29 (integrin β1), integrins β5, β6, and β8 chains. αV integrins have diverse functions in development and homeostasis. The rat anti-mouse (clone RMV-7) mAb has been reported to block LAK-cell binding to vitronectin, fibronectin, fibrinogen, and CD31. Furthermore, the RMV-7 clone reportedly inhibits LAK-cell cytoxicity against certain target cells by interfering with the binding of LAK cells to their target cells.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Expression of CD51 on mouse bone marrow myeloid cells. *C57BL/6 bone marrow leukocytes were stained with either purified rat IgG1κ isotype control mAb R3-34 (Cat. No. 553922, left panel) or purified rat anti-mouse CD51 (clone RMV-7) (right panel), followed by PE-conjugated goat anti-rat Ig (Cat. No. 550767, both panels). Flow cytometry was performed on a BD FACScan™ instrument (BD Biosciences, San Jose, CA). Please note that the population of cells having the lowest SSC (erythroid and lymphoid) show little expression of CD51, while cells with moderate-to-high SSC (myeloid cells) are almost uniformly CD51 positive (right panel).*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4° C.

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Application Notes

Application

Flow cytometry	Routinely Tested
Immunoprecipitation	Reported
Blocking	Reported

Recommended Assay Procedure:

Flow cytometry: Since this antigen is expressed at low density on the cell surface, it may be desirable to use a second-step reagent conjugated to a "bright" fluorochrome, such as PE goat anti-rat Ig (Cat. No. 550767).

Suggested Companion Products

Catalog Number	Name	Size	Clone
550767	PE Goat Anti-Rat Ig	0.2 mg	Polyclonal
553922	Purified Rat IgG1, κ Isotype Control	0.5 mg	R3-34

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
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.

References

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