Technical Data Sheet

BV510 Rat Anti-Mouse CD11a

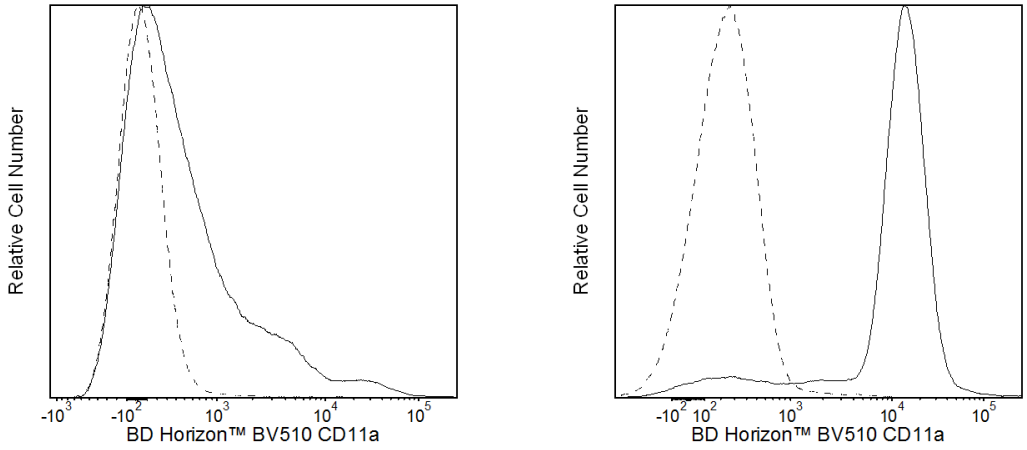
Product Information

Material Number:	**563669**
Alternate Name:	Itgal; Integrin alpha-L; Integrin αL; ITAL; LFA-1A; LFA-1α; Ly-15
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	M17/4
Immunogen:	C57BL/6 Mouse Splenic Secondary Cytotoxic T Lymphocytes
Isotype:	Rat (WF) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The M17/4 antibody reacts with the 180 kDa αL chain of LFA-1 (CD11a/CD18, αLβ2 integrin), a heterodimeric surface glycoprotein expressed on almost all leukocytes. CD8a+CD8b- intestinal intraepithelial T lymphocytes, which are believed to be thymus independent, do not express CD11a. LFA-1 mediates a variety of heterotypic and homotypic intercellular adhesions through interaction with ICAM-1 (CD54) and ICAM-2 (CD102), including participation in the immunological synapses between CD8+ T lymphocytes and antigen-presenting cells. mAb M17/4 blocks a variety of LFA-1-mediated cells interactions in vitro, and costimulatory effects have also been described. In vivo treatment with M17/4 mAb reduces the severity of graft-versus-host reactions, prolongs allograft survival, inhibits the development of autoimmunity, and blocks substance P-induced leukocyte migration. The M17/4 and 2D7 (Cat. No. 553120) antibodies are reported to recognize different epitopes of the CD11a molecule.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon™ BV510 conjugates are useful for the detection of dim markers off the violet laser.



***Flow cytometric analysis of CD11a expression on mouse bone-marrow cells**. Mouse bone-marrow cells were preincubated with Purified Rat Anti-Mouse CD16/CD32 antibody (Mouse BD Fc Block™) (Cat. No. 553141/553142). The cells were then stained with either BD Horizon™ BV510 Rat IgG2a, κ Isotype Control (Cat. No. 562952; dashed line histograms) or BD Horizon™ BV510 Rat Anti-Mouse CD11a antibody (Cat. No. 563669; solid line histogram). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphoid (Left Panel) or myeloid (Right Panel) cells. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer 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 BD Horizon™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 were removed.

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Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562952	BV510 Rat IgG2a, κ Isotype Control	50 µg	R35-95
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 mg	2.4G2

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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. Brilliant Violet™ 510 is a trademark of Sirigen.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.com/pharmingen/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. (Clone-specific: Immunohistochemistry)

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Zhao Y, Iwata M. Cross-linking of the TCR-CD3 complex with CD4, CD8 or LFA-1 induces an anti-apoptotic signal in thymocytes: the signal is canceled by FK506. *Int Immunol.* 1995; 7(9):1387-1396. (Clone-specific: (Co)-stimulation)

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