

Technical Data Sheet

BV421 Rat Anti-Mouse LPAM-1

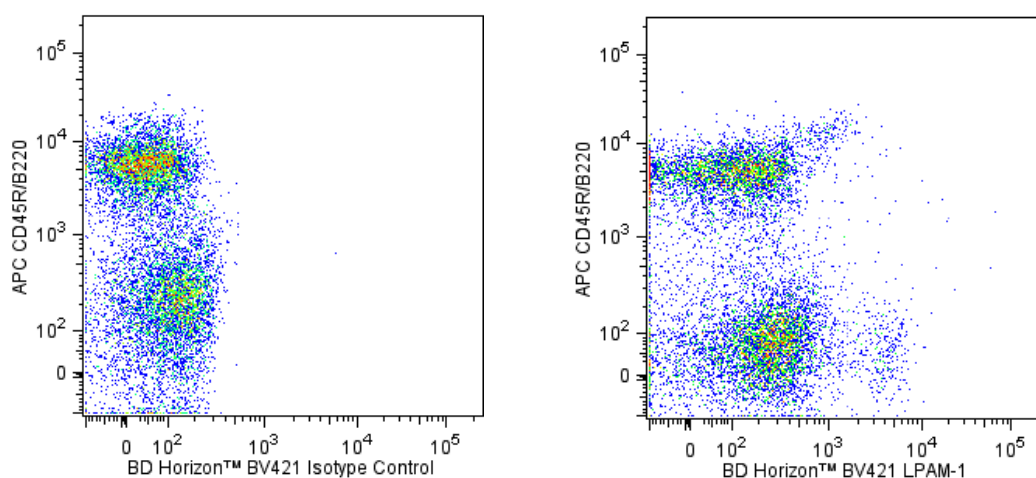
Product Information

Material Number:	562943
Alternate Name:	Itga4Itgb7; $\alpha 4\beta 7$ Integrin; alpha 4 beta 7 integrin; CD49d $\beta 7$
Size:	50 μ g
Concentration:	0.2 mg/ml
Clone:	DATK32
Immunogen:	AKR/Cum mouse T lymphoma line TK1
Isotype:	Rat (F344) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.

Description

The DATK32 monoclonal antibody specifically binds to an epitope specific for the $\alpha 4\beta 7$ integrin heterodimer. $\alpha 4\beta 7$ (LPAM-1) is expressed on most mature lymphocytes and on small subsets of thymic and bone marrow cells. It interacts with several ligands, including VCAM-1 (CD106), fibronectin, and MAdCAM-1. DATK32 antibody induces $\alpha 4\beta 7$ -dependent lymphocyte aggregation, but it inhibits other $\alpha 4\beta 7$ -mediated lymphocyte adhesion events, including binding to fibronectin, MAdCAM-1, and VCAM-1 (CD106).

The antibody was conjugated to BD Horizon™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.



Multicolor flow cytometric analysis of LPAM-1 expression on C57BL/6 mouse bone marrow cells. Bone Marrow cells were stained with APC Rat Anti-Mouse CD45R/B220 antibody (Cat. No. 553092/561880) and with either BD Horizon™ BV421 Rat IgG2a, κ Isotype Control (Cat. No. 562302; Left Panel) or BD Horizon™ BV421 Rat Anti-Mouse LPAM-1 antibody (Cat. No. 562943; Right Panel). Two-color flow cytometric dot plots show the correlated expression patterns of LPAM-1 (or Ig Isotype control staining) versus CD45R/B220 for gated events with the forward and side light-scatter characteristics of viable bone marrow cells. Flow cytometry 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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

Application Notes

Application

Flow cytometry

Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562602	BV421 Rat IgG2a, κ Isotype Control	50 μ g	R35-95
553092	APC Rat Anti-Mouse CD45R/B220	0.1 mg	RA3-6B2
561880	APC Rat Anti-Mouse CD45R/B220	25 μ g	RA3-6B2

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.

References

Andrew DP, Berlin C, Honda S, et al. Distinct but overlapping epitopes are involved in alpha 4 beta 7-mediated adhesion to vascular cell adhesion molecule-1, mucosal addressin-1, fibronectin, and lymphocyte aggregation. *J Immunol.* 1194; 153(9):3847-3861. (Immunogen: Blocking, Induction)

Andrew DP, Rott LS, Kilshaw PJ, Butcher EC. Distribution of alpha 4 beta 7 and alpha E beta 7 integrins on thymocytes, intestinal epithelial lymphocytes and peripheral lymphocytes. *Eur J Immunol.* 1996; 26(4):897-905. (Clone-specific: Blocking)

Berlin C, Berg EL, Briskin MJ, et al. Alpha 4 beta 7 integrin mediates lymphocyte binding to the mucosal vascular addressin MAdCAM-1. *Cell.* 1993; 74(1):185-195. (Clone-specific: Blocking)

Hamann A, Andrew DP, Jablonski-Westrich D, Holzmann B, Butcher EC. Role of alpha 4-integrins in lymphocyte homing to mucosal tissues in vivo. *J Immunol.* 1994; 152(7):3282-3293. (Clone-specific)

Kilshaw PJ, Murrant SJ. Expression and regulation of beta 7(beta p) integrins on mouse lymphocytes: relevance to the mucosal immune system. *Eur J Immunol.* 1991; 21(10):2591-2597. (Biology)

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