

Technical Data Sheet

Purified NA/LE Rat Anti-Mouse LPAM-1

Product Information

Material Number:	553809
Alternate Name:	Itga4Itgb7; $\alpha 4\beta 7$ Integrin; alpha 4 beta 7 integrin; CD49d $\beta 7$
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	DATK32
Immunogen:	AKR/Cum mouse T lymphoma line TK1
Isotype:	Rat (F344) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2 μ m sterile filtered. Endotoxin level is ≤ 0.01 EU/ μ g (≤ 0.001 ng/ μ g) of protein as determined by the LAL assay.

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).

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

Flow cytometry	Routinely Tested
Blocking	Reported
Induction	Reported
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

Flow cytometry: Because expression of LPAM-1 on peripheral lymphocytes is at very low density, we recommend amplification of the signal through the use of a biotinylated second-step antibody plus a "bright" third-step reagent, such as Streptavidin-PE (Cat. no. 554061), for detection of the antigen by flow cytometry. Other reported applications include in vitro blocking of adhesion, induction of cellular aggregation, and *in vivo* blocking of lymphocyte homing to mucosal sites.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554061	PE Streptavidin	0.5 mg	(none)
553926	Purified NA/LE Rat IgG2a κ Isotype Control	0.5 mg	R35-95
554014	Biotin Goat Anti-Rat Ig	0.5 mg	Polyclonal

Product Notices

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

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: Blocking)

Kilshaw PJ, Murant 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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