

Datasheet: AHP1225

Description:	RABBIT ANTI HUMAN CD49d (C-TERMINAL)
Specificity:	CD49d (C-TERMINAL)
Other names:	INTEGRIN ALPHA 4 CHAIN, VLA-4
Format:	Purified
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	50 µg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			■	
Immunohistology - Frozen			■	
Immunohistology - Paraffin (1)	■			15 - 25ug/ml
ELISA			■	
Immunoprecipitation			■	
Western Blotting			■	
Functional Assays			■	

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.

Target Species	Human
Product Form	Purified IgG - liquid
Antiserum Preparation	Antisera to human CD49d were raised by repeated immunisations of rabbit with highly purified antigen. Purified IgG prepared by affinity chromatography.
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.1% Sodium Azide (NaN ₃)
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Synthetic peptide: C-terminal domain of human CD49d, conjugated to KLH.

**External Database
Links**

UniProt:

[P13612](#) [Related reagents](#)

Entrez Gene:

[3676](#) ITGA4 [Related reagents](#)

Synonyms

CD49D

Specificity

Rabbit anti Human CD49d polyclonal antibody detects an epitope within the C-terminal region of human CD49d, also known as integrin alpha-4 or VLA-4 subunit alpha. CD49d is a ~150kDa single pass type 1 transmembrane glycoprotein with seven [FG-GAP](#) repeats, characteristic of alpha integrins, in its extracellular domain. CD49d can be proteolytically cleaved to yield fragments of 80 and 70kDa ([Hemler et al. 1987](#)). CD49d associates with either [CD29](#) to form VLA-4 or with Integrin beta-7 to form The Peyer patches-specific homing receptor LPAM-1, involved in the lymphocyte migration and homing to gut-associated lymphoid tissue ([Sackstein 2006](#)) through its interaction with MadCam-1, preferentially expressed on Peyer's patch high endothelial venules and postcapillary venules in lamina propria ([Briskin et al. 1997](#)).

VLA-4 is expressed on lymphocytes, monocytes, mast cells, macrophages, basophils and eosinophils, and has key roles in inflammation, cellular adhesion and cellular activation. LPAM-1 is expressed mainly on lymphocytes, and plays a key role in lymphocyte recruitment to sites of inflammation.

**Histology Positive
Control Tissue**

Thymus, Medulla.

References

1. Brachtl, G. *et al.* (2011) Differential Bone Marrow Homing Capacity of VLA-4 and CD38 High Expressing Chronic Lymphocytic Leukemia Cells. [PLoS One. 6: e23758.](#)
2. Lin, K.C. and Castro, A.C. (1998) Very late antigen 4 (VLA4) antagonists as anti-inflammatory agents. [Curr. Opin. Chem. Biol. 2: 453-457.](#)

Further Reading

1. Barthel, S.R. *et al.* (2006) Differential engagement of modules 1 and 4 of vascular cell adhesion molecule-1 (CD106) by integrins alpha4beta1 (CD49d/29) and alphaMbeta2 (CD11b/18) of eosinophils. [J. Biol. Chem. 281: 32175-32187.](#)
2. Pepinsky, R.B. *et al.* (2005) Design, synthesis, and analysis of a polyethylene glycol-modified (PEGylated) small molecule inhibitor of integrin {alpha}4{beta}1 with improved pharmaceutical properties. [J. Pharmacol. Exp. Ther. 312: 742-750.](#)

Storage

Store at +4°C or at -20°C if preferred.
Storage in frost-free freezers is not recommended.
This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

18 months from date of despatch.

**Health And Safety
Information**

Material Safety Datasheet documentation #10303 available at:
10303: <https://www.bio-rad-antibodies.com/uploads/MSDS/10303.pdf>

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Sheep Anti Rabbit IgG (STAR34...) [FITC](#)
Sheep Anti Rabbit IgG (STAR35...) [RPE](#)
Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)
Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)
Sheep Anti Rabbit IgG (2AB02...) [Biotin](#)
Sheep Anti Rabbit IgG (STAR36...) [DyLight®488](#), [DyLight®549](#), [DyLight®649](#),
[DyLight®680](#), [DyLight®800](#)

Recommended Useful Reagents

[HISTAR DETECTION SYSTEM \(STAR3000A\)](#)
[HISTAR DETECTION SYSTEM \(STAR3000B\)](#)
[HISTAR DETECTION SYSTEM \(STAR3000C\)](#)
[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025A\)](#)
[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025C\)](#)

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