

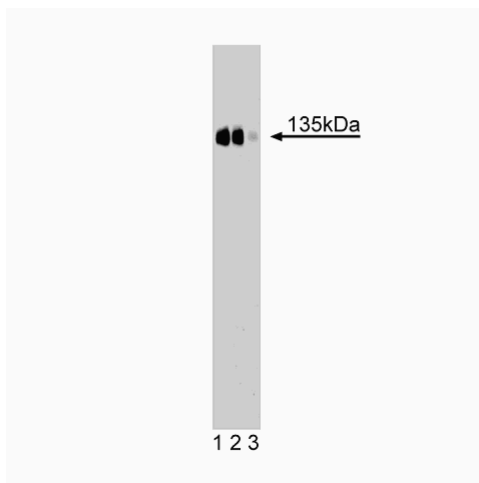
## Technical Data Sheet

**Purified Mouse Anti-CD49c****Product Information**

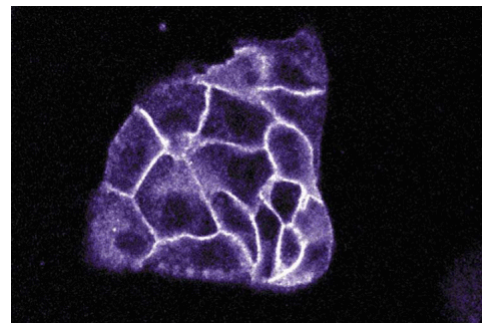
<b>Material Number:</b>	<b>611044</b>
<b>Alternate Name:</b>	Integrin $\alpha 3$ ; VLA-3 $\alpha$
<b>Size:</b>	50 $\mu$ g
<b>Concentration:</b>	250 $\mu$ g/ml
<b>Clone:</b>	42/CD49c
<b>Immunogen:</b>	Mouse VLA-3 $\alpha$ aa. 110-325
<b>Isotype:</b>	Mouse IgG1
<b>Reactivity:</b>	QC Testing: Rat Tested in Development: Mouse, Dog
<b>Target MW:</b>	135 kDa
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09\%$ sodium azide.

**Description**

Integrins are a family of dimeric proteins that mediate cell-to-cell and extracellular matrix adhesion. They consist of a large  $\alpha$  chain that is non-covalently associated with a smaller  $\beta$  chain which defines the integrin subfamilies. VLA-3 (Very Late Antigen-3), a member of the integrin superfamily, exhibits elevated expression on B lymphocytes, but is also found on monocytes, platelets, and hematopoietic progenitor cells. A heterodimer of  $\alpha 3$  (CD49c) and  $\beta 1$  (CD29) subunits, VLA is a receptor for laminin, fibronectin, and collagen. The  $\alpha 3$  chain contains a large extracellular domain with three putative metal-binding sequences, a transmembrane domain, and a short cytoplasmic tail. Differing requirements for divalent cations and the influence of RGD peptides results in multiple ligand-binding mechanisms for VLA-3. Although its expression is restricted in normal tissues, VLA-3 is found on a variety of cultured tumor cells. In addition, levels of VLA-3 have been shown to correlate with the degree of invasiveness of malignant melanoma cells. Thus, VLA-3 mediates intercellular adhesion and cell migration in normal and, possibly, cancerous cell types.



**Western blot analysis of CD49c (integrin  $\alpha 3$ ) on a rat kidney lysate.** Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-CD49c antibody.



**Immunofluorescence staining of MDCK cells (canine kidney; ATCC CCL-34).**

**Preparation and Storage**

Store undiluted at  $-20^{\circ}$  C.

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

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## Application Notes

### Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

### Recommended Assay Procedure:

**Western blot:** Please refer to [http://www.bdbiosciences.com/pharming/en/protocols/Western\\_Blotting.shtml](http://www.bdbiosciences.com/pharming/en/protocols/Western_Blotting.shtml)

### Suggested Companion Products

Catalog Number	Name	Size	Clone
611466	Rat Kidney Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

### References

Takada Y, Murphy E, Pil P, Chen C, Ginsberg MH, Hemler ME. Molecular cloning and expression of the cDNA for alpha 3 subunit of human alpha 3 beta 1 (VLA-3), an integrin receptor for fibronectin, laminin, and collagen. *J Cell Physiol.* 1991; 115(1):257-266.(Biology)  
Takeuchi K, Hirano K, Tsuji T, Osawa T, Irimura T. cDNA cloning of mouse VLA-3 alpha subunit. *J Cell Biochem.* 1995; 57(2):371-377.(Biology)