Technical Data Sheet

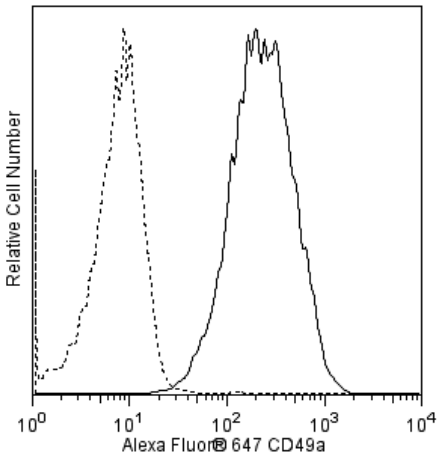
Alexa Fluor® 647 Hamster Anti-Rat/Mouse CD49a

Product Information

Material Number:	**562113**
Alternate Name:	Itga1; Integrin alpha-1; Integrin α1; Laminin and collagen receptor; VLA-1a
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	Ha31/8
Immunogen:	Rat Emulsified Lewis Rat Glomeruli Cells
Isotype:	Armenian Hamster IgG2, λ1
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The Ha31/8 monoclonal antibody specifically binds to the 180-kDa integrin α1 chain (CD49a), which is a transmembrane glycoprotein that non-covalently associates with the integrin β1 subunit (CD29) to form the α1β1 (complex known as VLA-1). VLA-1 has been reported to be expressed on activated T cells, monocytes, smooth muscle cells, and endothelial cells. It is a receptor for collagen and laminin. The Ha31/8 monoclonal antibody is specific for both rat and mouse CD49a. It has been reported that Ha31/8 antibody can block VLA-1-mediated binding of rat cells to collagen.



Flow cytometric analysis of Rat/Mouse CD49a expressed on C1300 cells. *C1300 cells were stained with either Alexa Fluor® 647 Armenian Hamster IgG2, λ1 Isotype Control (Cat. No. 562112, dashed line histogram) or an Alexa Fluor® 647 Hamster anti-Rat/Mouse CD49a antibody (Cat. No. 562113, solid line histogram). Flow cytometric fluorescence histograms were derived from gated events based on forward and side light-scatter characteristics of viable 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 to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
562112	Alexa Fluor® 647 Hamster IgG2, λ1 Isotype Control	0.1 mg	Ha4/8
554656	Stain Buffer (FBS)	500 ml	(none)

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Product Notices

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
2. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
3. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
4. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
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 Fluorochrome Web Page at www.bdbiosciences.com/colors.
7. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf.
8. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
9. An isotype control should be used at the same concentration as the antibody of interest.

References

Hemler ME. VLA proteins in the integrin family: structures, functions, and their role on leukocytes. *Annu Rev Immunol.* 1990; 8:365-400. (Biology)

Mendrick DL, Kelly DM, duMont SS, Sandstrom DJ. Glomerular epithelial and mesangial cells differentially modulate the binding specificities of VLA-1 and VLA-2. *Lab Invest.* 1995; 72(3):367-375. (Immunogen: Blocking)

Miyake S, Sakurai T, Okumura K, Yagita H. Identification of collagen and laminin receptor integrins on murine T lymphocytes. *Eur J Immunol.* 1994; 24(9):2000-2005. (Biology)

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