Technical Data Sheet

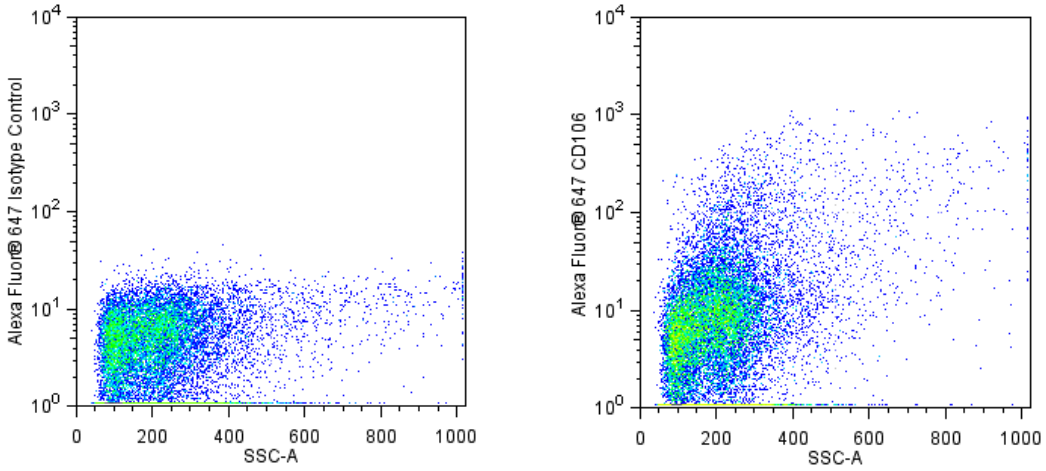
Alexa Fluor® 647 Rat Anti-Mouse CD106

Product Information

Material Number:	**561612**
Alternate Name:	Vcam-1; Vascular cell adhesion molecule 1; Vascular cell adhesion protein 1
Entrez Gene ID:	22329
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	429 (MVCAM.A)
Immunogen:	Mouse preadipose cell line PA6
Isotype:	Rat (LEW) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 429 monoclonal antibody specifically binds to both the long (~110 kDa) transmembrane-spanning form and the truncated (~47 kDa) GPI-linked form of vascular cell adhesion molecule-1 (VCAM-1, CD106). CD106 is constitutively expressed on bone marrow stromal cells, myeloid cells, and splenic dendritic cells. Its expression on endothelial cells is upregulated by inflammatory cytokines and in certain pathologic conditions. CD106 expression has also been detected on apoptotic thymocytes, splenocytes, and lymphoid cell lines. VCAM-1 is a counter-receptor for VLA-4 (α4β1 integrin) and LPAM-1 (α4β7 integrin), and the 429 antibody partially blocks VCAM-1-mediated binding functions. Source of the immunogen was the mouse preadipose cell line PA6.



Flow cytometric analysis of CD106 expression on mouse bone marrow cells. *BALB/c mouse bone marrow cells were stained with either an Alexa Fluor® 647 Rat IgG2a, κ Isotype Control (Cat No. 557690, Left Panel) or with the Alexa Fluor® 647 Rat Anti-Mouse CD106 antibody (Cat No. 561612, Right Panel). Flow cytometric dot plots showing the correlated expression of side light-scatter versus CD106 (or Ig isotype control staining) were derived from total viable cells from bone marrow. 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

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.268.5430	32.53.720.550	0120.8555.90	65.6861.0633	0800.771.7157

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Suggested Companion Products

Catalog Number	Name	Size	Clone
557690	Alexa Fluor® 647 Rat IgG2a, κ Isotype Control	0.1 mg	R35-95
554656	Stain Buffer (FBS)	500 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. 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.
4. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
8. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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Ishiyama N, Kitagawa M, Takahashi H, Kina T, Hirokawa K. Expression of VCAM-1 in lymphocytes during the process of apoptosis. *Pathobiology.* 1998; 66(6):274-283. (Biology)

Kinashi T, Springer TA. Adhesion molecules in hematopoietic cells. *Blood Cells.* 1994; 20(1):25-44. (Biology)

Kinashi T, St Pierre Y, Springer TA. Expression of glycophosphatidylinositol-anchored and -non-anchored isoforms of vascular cell adhesion molecule 1 in murine stromal and endothelial cells. *J Leukoc Biol.* 1995; 57(1):168-173. (Immunogen)

Koni PA, Joshi SK, Temann UA, Olson D, Burkly L, Flavell RA. Conditional vascular cell adhesion molecule 1 deletion in mice: impaired lymphocyte migration to bone marrow. *J Exp Med.* 2001; 193(6):741-754. (Biology)