



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

PRODUCT INFORMATION



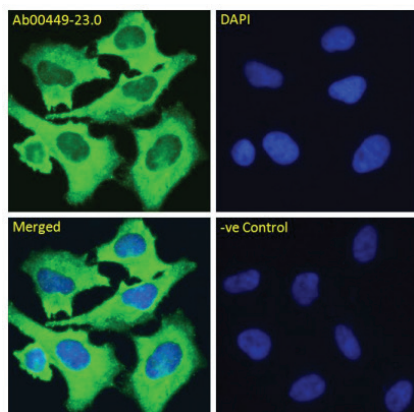
Integrin $\alpha 5\beta 1$ Chimeric Monoclonal Antibody

Item No. 37154

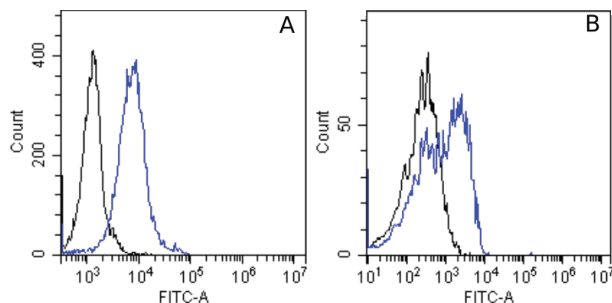
Overview and Properties

Contents:	This vial contains 200 μg of protein A-affinity purified monoclonal antibody.
Synonyms:	CD29, CD49E, CD49 Antigen-like Family Member E, Cluster of Differentiation 29, Fibronectin Receptor Subunit α , Fibronectin Receptor Subunit β , GPIIa, ITGA5, ITGB1, Platelet Glycoprotein IIa, Very Late Antigen-5, VLA-4 Subunit β , VLA-5
Immunogen:	Recombinant human $\alpha 5\beta 1$
Species Reactivity:	(+) Human; other species not tested
Uniprot No.:	P08648
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥ 1 year
Storage Buffer:	PBS with 0.02% ProClin™ 300
Clone:	M200 (Volociximab)
Host:	Chimeric Monoclonal Antibody
Isotype:	IgG4k
Applications:	ELISA, Flow Cytometry (FC), Immunofluorescence (IF), and Immunohistochemistry (IHC); The optimal working concentration/dilution should be determined empirically.

Images



Immunofluorescent labeling of fixed HeLa cells labeled with Integrin $\alpha 5\beta 1$ Chimeric Monoclonal Antibody. Immunofluorescence analysis of paraformaldehyde fixed HeLa cells, permeabilized with 0.15% Triton stained with the chimeric rabbit IgG version of M200 at 10 $\mu\text{g}/\text{ml}$ for 1 hour followed by Alexa Fluor® 488 secondary antibody (1 $\mu\text{g}/\text{ml}$), showing cytoplasmic and membrane staining. The nuclear stain is DAPI (blue). Panels show from left-right, top-bottom Ab00449-23.0, DAPI, merged channels and a negative control. The negative control was stained with unimmunized rabbit IgG followed by Alexa Fluor® 488 secondary antibody.



Flow cytometry using the Integrin $\alpha 5\beta 1$ Chimeric Monoclonal Antibody (Item No. 37154). PBMC's (A) and U93 cells (B) were stained with unimmunized rabbit IgG antibody (black line) or the rabbit-chimeric version of M200 (Volociximab) (blue line) at a concentration of 10 $\mu\text{g}/\text{ml}$ for 30 minutes at RT. After washing, bound antibody was detected using anti-rabbit IgG JK (FITC-conjugate) antibody at 2 $\mu\text{g}/\text{ml}$ and cells analyzed on a FACSCanto flow-cytometer.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/10/2022

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Integrin $\alpha 5\beta 1$ is a cell adhesion receptor that is involved in the attachment of cells to the extracellular matrix (ECM) and cell-cell interactions.¹ It is composed of a heterodimer of two integrin subunits, integrin $\alpha 5$, also known as CD49E, that binds to the RGD sequence and central cell-binding domain of fibronectin, and integrin $\beta 1$, also known as CD29, that interacts with the cytoskeleton and intracellular signaling molecules.^{2,3} Integrin $\alpha 5\beta 1$ localizes to the cell surface and mediates outside-in and inside-out signaling cascades that regulate angiogenesis and cell differentiation, as well as migration, development, and hematopoiesis.^{1,4} An anti-integrin $\alpha 5\beta 1$ monoclonal antibody inhibits tube formation and proliferation of human umbilical vein endothelial cells (HUVECs) *in vitro* and prevents laser-induced choroidal neovascularization in a cynomolgus monkey model of macular degeneration.⁵ Integrin $\alpha 5\beta 1$ levels are increased in tumoral neovasculature.⁶ Cayman's Integrin $\alpha 5\beta 1$ Chimeric Monoclonal Antibody was produced recombinantly from the original M200 antibody sequence and can be used for ELISA, flow cytometry (FC), immunofluorescence (IF), and immunohistochemistry (IHC) applications. The M200 antibody was generated by fusing human IgG4k constant domains to the antigen-binding domain of a mouse anti-integrin $\alpha 5\beta 1$ monoclonal antibody.⁷

References

1. Barczyk, M., Carracedo, S., and Gullberg, D. Integrins. *Cell Tissue Res.* **339(1)**, 269-280 (2010).
2. Mould, A.P., Askari, A.J., Aota, S., *et al.* Defining the topology of integrin $\alpha 5\beta 1$ -fibronectin interactions using inhibitory anti- $\alpha 5$ and anti- $\beta 1$ monoclonal antibodies. *J. Biol. Chem.* **272(28)**, 17283-17292 (1997).
3. Brakebusch, C., Hirsch, E., Potocnik, A., *et al.* Genetic analysis of $\beta 1$ integrin function: Confirmed, new and revised roles for a crucial family of cell adhesion molecules. *J. Cell Sci.* **110(Pt 23)**, 2895-2904 (1997).
4. Lee, M.-Y., Huang, J.-P., Chen, Y.-Y., *et al.* Angiogenesis in differentiated placental multipotent mesenchymal stromal cells is dependent on integrin $\alpha 5\beta 1$. *PLoS One* **4(10)**, e6913 (2009).
5. Ramakrishnan, V., Bhaskar, V., Law, D.A., *et al.* Preclinical evaluation of an anti- $\alpha 5\beta 1$ integrin antibody as a novel anti-angiogenic agent. *J. Exp. Ther. Oncol.* **5(4)**, 273-286 (2006).
6. Kim, S., Bell, K., Mousa, S.A., *et al.* Regulation of angiogenesis *in vivo* by ligation of integrin $\alpha 5\beta 1$ with the central cell-binding domain of fibronectin. *Am. J. Pathol.* **156(4)**, 1345-1362 (2000).
7. Ramakrishnan, V., Bhaskar, V., Law, D.A., *et al.* Preclinical evaluation of an anti- $\alpha 5\beta 1$ integrin antibody as a novel anti-angiogenic agent. *J. Exp. Ther. Oncol.* **5(4)**, 273-286 (2006).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM