PRODUCT INFORMATION

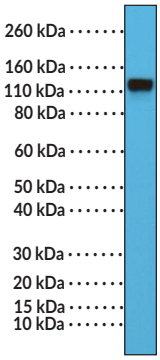
Integrin β1/CD29 Rabbit Monoclonal Antibody (Clone RM285)

Item No. 32237

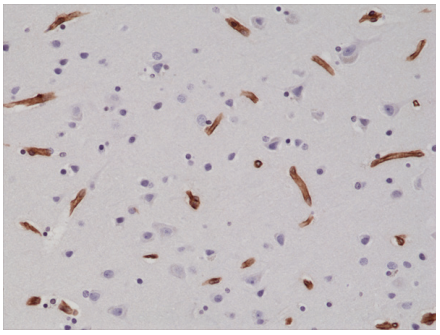
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Cluster of Differentiation 29, GPIIa, ITGB1, Fibronectin Receptor Subunit β, Platelet Glycoprotein IIa, VLA-4 Subunit β
Immunogen:	Peptide corresponding to human integrin β1
Cross Reactivity:	(+) Integrin β1
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM285
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:200 for IHC and 1:2,000-1:4,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

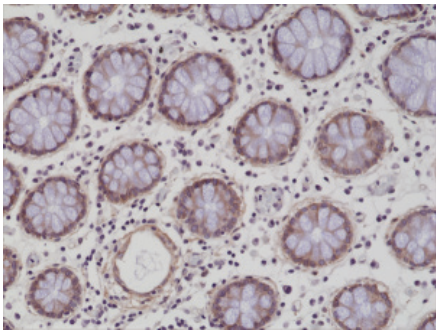
Images



WB of HeLa cell lysates using Integrin β1/CD29 Rabbit Monoclonal Antibody (Clone RM285) at a dilution of 1:4,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human brain tissue using Integrin β1/CD29 Rabbit Monoclonal Antibody (Clone RM285) at a 1:200 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human colon tissue using Integrin β1/CD29 Rabbit Monoclonal Antibody (Clone RM285) at a 1:200 dilution.

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Description

Integrins are cell adhesion receptors that mediate the attachment of cells to the extracellular matrix (ECM) and facilitate cell-cell interactions.[1] The integrin family contains 18 α subunits and eight β subunits that form 24 different heterodimers grouped into familial subgroups based on subunit composition and/or their ligand binding properties. Integrin β1, also known as CD29, is an integrin subunit that heterodimerizes with α integrin subunits, forming 12 different α-β integrin heterodimers that function as receptors for a variety of ECM proteins, including collagens, fibronectins, and laminins, and mediate outside-in and inside-out signaling cascades that regulate numerous cellular processes, including proliferation, adhesion, survival, migration, and organogenesis.[2] Integrin β1 is expressed in most tissues, with high levels found in epidermal stem cells.[1,3] Increased tumor levels of integrin β1 have been found in patients with lung or breast cancer and are associated with decreased overall survival.[4] Cayman's Integrin β1/CD29 Rabbit Monoclonal Antibody (Clone RM285) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Barczyk, M., Carracedo, S., and Gullberg, D. Integrins. *Cell Tissue Res.* **339(1)**, 269-280 (2010).
2. Howe, G.A. and Addison, C.L. β1 integrin: An emerging player in the modulation of tumorigenesis and response to therapy. *Cell Adh. Migr.* **6(2)**, 71-77 (2012).
3. Brakebusch, C., Hirsch, E., Potocnik, A., *et al.* Genetic analysis of β1 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. Sun, Q., Zhou, C., Ma, R., *et al.* Prognostic value of increased integrin-beta 1 expression in solid cancers: A meta-analysis. *Onco Targets Ther.* **11**, 1787-1799 (2018).

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