

Anti-Integrin $\beta 1$, clone MB1.2



Monoclonal Antibody

Cat. # MAB1997

Lot # 2019776

pack size: 100 μ g

Store at 2-8°C

FOR RESEARCH USE ONLY
NOT FOR USE IN HUMANS

Certificate of Analysis

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Applications	Species Cross-Reactivity	Antibody Isotype	Epitope/Region	Host Species	Molecular Weight	Accession #
WB, FC, IH, IP	M, R	IgG2k	N/A	R	130 kDa	NM_002211.2

Background

Integrin beta 1, also known as CD29, is a 130 kDa transmembrane glycoprotein that forms noncovalent complexes with various Integrin alpha subunits (including alpha 1, alpha 2, alpha 3, alpha 4, alpha 5, and alpha 6, also known as CD49a, CD49b, CD49c, CD49d, CD49e, and CD49f, respectively) to form the functional receptors that bind to specific extracellular matrix proteins. Integrin receptors are involved in the regulation of a variety of important biological functions, including embryonic development, wound repair, hemostasis, and prevention of programmed cell death. They are also implicated in abnormal pathological states such as tumor directed angiogenesis, tumor cell growth, and metastasis. Interactions between integrins and the extracellular matrix lead to activation of signal transduction pathways and regulation of gene expression.

Presentation

Purified rat monoclonal IgG2k liquid in buffer containing 0.02M phosphate buffer, pH 7.6, 0.25M NaCl with 0.1% Na₃

Concentration

1 mg/mL

Specificity

Reacts with $\beta 1$ subunit of VLA ($\beta 1$) integrins

Species Cross-reactivity

Mouse. Expected to react with rat based on sequence homology.

Molecular Weight

88 kDa; around 130 kDa with glycosylation

Method of Purification

Protein A Purified

Storage and Handling

Stable for 1 year at 2-8°C from date of receipt.

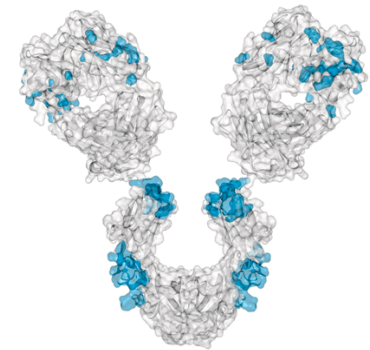
Control

Human OVCAR5 cell line whole cell lysate; C2C12 lysate.

Quality Control Testing

Evaluated by Western Blot on C2C12 lysate.

Western Blot Analysis: 1:1000 dilution of this antibody detected integrin beta 1 in 10 μ g of C2C12 lysate.



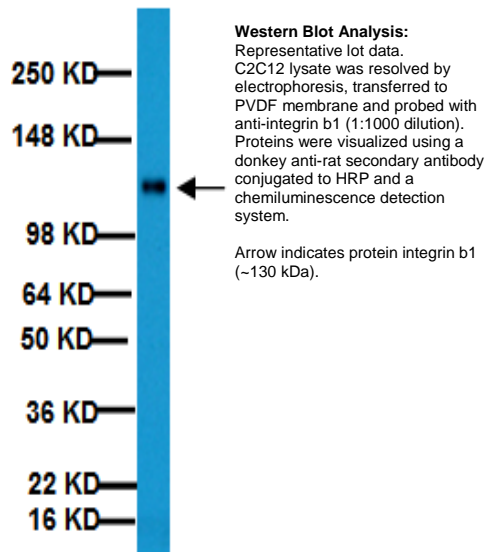
References

1. Mikaelian, I., *et al.* (2004). *Toxicology Pathology*. 32:181-191.
2. Demyanenko, G. P., *et al.* (2004). *Neuron*. 44(3):423-437.
3. Wang, D., *et al.* (2003). *Invest Ophthalmol Vis Sci*. 44: 4698-4704.
4. Ballestrom, C.G., *et al.* (1996). *Hybridoma*. 15: 125-132.

Additional Research Applications

Immunoprecipitation: A previous lot of this antibody was used to immunoprecipitate VLA ($\beta 1$) integrins from lysate of 106 cell equivalent: 2 μ g.

Flow cytometry: A 10 μ g/mL concentration of a previous lot was used in FC.



APPLICATION LEGEND: WB Western Blotting FC Flow Cytometry IP Immunoprecipitation IC Immunocytochemistry

IF Immunofluorescence IH Immunohistochemistry (Tissue)

SPECIES LEGEND: H Human M Mouse R Rat Bb Rabbit WR Most Common Vertebrates

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Additional Research Applications

Immunohistochemistry in frozen tissue sections: 20 μ g/mL from a previous lot was used. As a result of the wide tissue distribution of VLA (β 1), binding of MAB1997 to diverse cell types is commonly observed.

Does not block VLA integrin mediated cell adhesion to matrix proteins. Activation of VLA (β 1) integrin signaling properties by MAB1997 has not been characterized.

Optimal working dilutions must be determined by end user.

PROTOCOL**Western Blotting**

1. Perform SDS-polyacrylamide gel electrophoresis (SDS-PAGE) on cell lysate and transfer the proteins to a PVDF membrane. Wash the PVDF membrane twice with water.
2. Block the blotted PVDF membrane in freshly prepared 5% BSA with 0.05% Tween[®]-20 for 1 hour at room temperature with constant agitation.
3. Incubate the PVDF with the recommended dilution of Anti-Integrin β 1 diluted in freshly prepared 5% BSA for 1 hour at room temperature or overnight with agitation at 2-8°C.
4. Wash the PVDF 3 times with TBST.
5. Incubate the PVDF in the secondary reagent of choice (a donkey anti-rat HRP conjugate IgG, 1:1000 dilution was used) in 5% milk for 1 hour with agitation at room temperature.
6. Wash the PVDF 3-5 times with TBST.
7. Use Spray and Glow Catalog # 17-373 to visualize results. Use as directed.

RELATED PRODUCTS (specific)

cat #	description
MAB1965	■ Anti-Integrin beta1, a.a. 82-87, clone JB1A (a.k.a. J10)
MAB2079Z	■ Anti-Integrin Beta1, activated forms only, Clone HUTS-4, Azide Free
MAB2259Z	■ Anti-Integrin Beta1, activated, Clone B44, Azide Free
MAB19294	■ Anti-Integrin beta1, active beta1 integrins, clone TASC/9D11
MAB2247	■ Anti-Integrin beta1, clone 12G10
MAB2250	■ Anti-Integrin beta1, clone 21C8
MAB2250Z	■ Anti-Integrin Beta1, Clone 21C8, Azide Free
MAB2253	■ Anti-Integrin beta1, clone 6S6
MAB2253Z	■ Anti-Integrin Beta1, Clone 6S6, Azide Free
MAB2251	■ Anti-Integrin beta1, clone B3B11
MAB2251Z	■ Anti-Integrin Beta1, Clone B3B11, Azide Free
MAB1977	■ Anti-Integrin beta1, clone DF5
MAB2000	■ Anti-Integrin beta1, clone HB1.1
MAB1963	■ Anti-Integrin beta1, clone JB1
MAB2252	■ Anti-Integrin beta1, clone N29
MAB2252Z	■ Anti-Integrin Beta1, Clone N29, Azide Free
MAB1987	■ Anti-Integrin beta1, clone P4C10
MAB1987Z	■ Anti-Integrin Beta1, Clone P4C10, Azide Free
MAB1951	■ Anti-Integrin beta1, clone P4G11
MAB1951Z	■ Anti-Integrin Beta1, Clone P4G11, Azide Free
MAB1951F	■ Anti-Integrin Beta1, Clone P4G11, FITC Conjugated
MAB1959	■ Anti-Integrin beta1, clone P5D2
CBL481B	■ Anti-Integrin Beta1, Clone TDM29, Biotin Conjugated
CBL481P	■ Anti-Integrin Beta1, Clone TDM29, Phycoerythrin Conjugated
MAB13443	■ Anti-Integrin beta1, clone V2E9
AB1952	■ Anti-Integrin beta1, Cytosolic
AB1952P	■ Anti-Integrin beta1, Cytosolic
CBL481F	■ Anti-Integrin Beta1, FITC Conjugated, Clone TDM29, FITC Conjugated
AB1927	■ Anti-Integrin beta1, phospho-specific [Ser785]
MAB1981	■ Anti-Integrin β 1, within a.a. 588-706 of human β 1, clone LM534
MAB1900	■ Anti-Integrin beta1D, C-terminus cytoplasmic domain, clone 2B1
ECM522	■ Beta1 Integrin Mediated Cell Adhesion Kit
ECM445	■ Beta1 Integrin Partners Kit
ECM455	■ Beta1 Integrin Polyclonal Antibody Kit
AP136P	■ Goat anti-Rat IgG, Peroxidase Conjugated

RELATED PRODUCTS (non-specific)

cat #	description
IPVH00010	■ Immobilon-P 26.5 cm x 3.75 m Roll PVDF 0.45 μ m
IPFL00010	■ Immobilon-FL 26.5 cm x 3.75 m Roll PVDF 0.45 μ m
IPVH07850	■ Immobilon-P 7 x 8.4 cm PVDF 0.45 mm (sheet) 50/pk
ISEQ00010	■ Immobilon-P SQ 26.5 cm x 3.75 m 1 roll PVDF 0.2 μ m
ISEQ07850	■ Immobilon-P 7 x 8.4 cm PVDF 0.2 mm (sheet) 50/pk
IPFL07810	■ Immobilon-FL 7 x 8.4 cm PVDF 0.45 mm (sheet) 10/pk
WBKLS0100	■ Immobilon Western Chemilum HRP Substrate 100 mL
17-373	■ Spray & Glow [™] ECL WB Detection System 1 ea
2060	■ Re-Blot Western Blot Recycling Kit
2500	■ Re-Blot Plus Western Blot Recycling Kit
B2080-175GM	■ Blot Quick Blocker Membrane Blocking Agent 175G

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