

Integrin $\beta 1$ (Extracellular region)

Mouse Monoclonal IgG1

Cat. # IM0041

Size 100 μ l

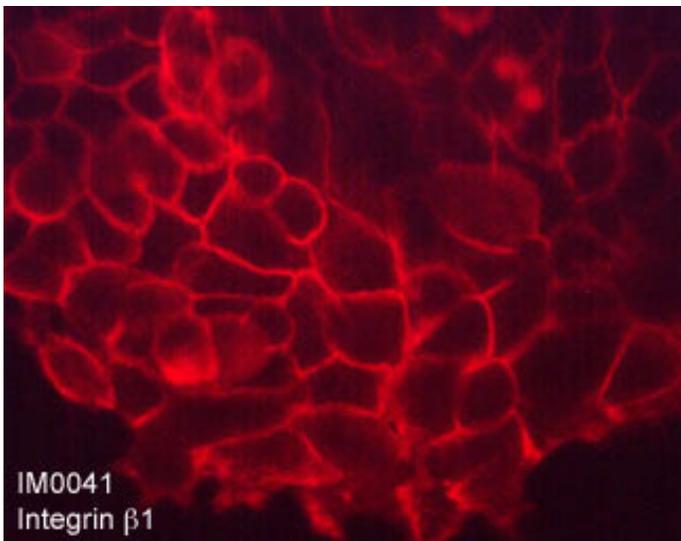
Background

Integrins are cell adhesion molecules that can mediate bidirectional transfer of signals across the plasma membrane. The cytoplasmic domains of integrin family members interact with components of the signal transduction apparatus within cells. Integrin receptors contain noncovalently associated α and β subunits that consist of a large extracellular region (the ligand-binding domain), a short transmembrane region, and a cytoplasmic domain of varying length. In mammals, at least 17 α subunits and 8 β subunits have been identified and these proteins can heterodimerize to form at least 22 different receptors. The $\beta 1$ subfamily includes 12 distinct integrin proteins that bind to different extracellular matrix molecules. Integrin $\beta 1$ has been implicated in various activities including embryonic development, blood vessel, skin, bone, and muscle formation, as well as tumor metastasis and angiogenesis.

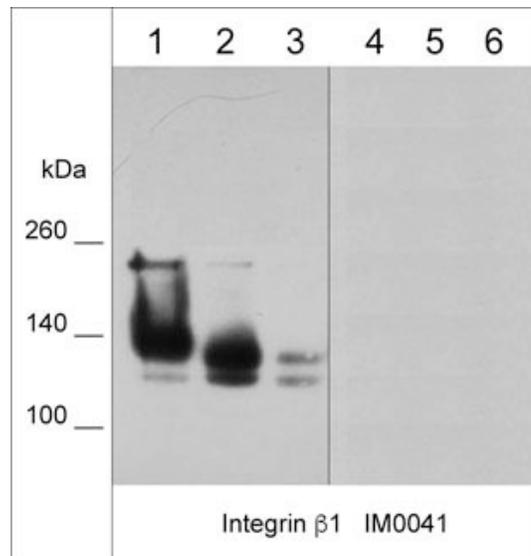
Background References

Wang, L. et al. (2012) J Cell Physiol. 227(2):474.

Iwamoto, D. & Calderwood, D. (2015) Cur Opin Cel Bio. 36:41.



Immunocytochemical labeling of Integrin $\beta 1$ in paraformaldehyde fixed human A431 cells. The cells were labeled with mouse monoclonal anti-Integrin $\beta 1$ (clone M004). The antibody was detected using goat anti-mouse DyLight[®] 594.



Western blot analysis of native (lanes 1-3) and denatured (lanes 4-6) cell lysates from human A431 (lane 1 & 4), A549 (lane 2 & 5), and LNCaP (lane 3 & 6). The blots were probed with mouse monoclonal anti-Integrin $\beta 1$ (IM0041) at 1:1000 dilution.

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Immunogen

Clone M004 was generated from a proprietary antigen related to the extracellular region of human integrin β 1 in complex with integrin α expressed in the A431 epidermoid carcinoma cell line.

Buffer and Storage

Mouse monoclonal antibody purified with protein G chromatography is supplied in 100 μ l phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C . Stable for 1 year.

Applications

WB	1:1000
ICC	1:100
IP	1:100
ELISA	1:2000

Species Reactivity

Hu

End user should determine optimal dilution for their particular applications and experiments.

Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.

Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

Specificity

Clone M004 detects 120-150 kDa* bands corresponding to Integrin β 1 on SDS-PAGE immunoblots of native human A431, A549, MDA-MB-231, and LNCaP cell lysates. The antibody also detects native recombinant human Integrin α 1/ β 1, α 2/ β 1, and α 3/ β 1 complexes, but does not detect recombinant human Integrin α 6/ β 4 or α V/ β 3 complexes. The antibody does not detect the denatured form of Integrin β 1. Clone M004 can be used in western blot, immunocytochemical labeling, ELISA, and immunoprecipitation, as well for detecting live, unfixed cells.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.

"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

- IK6270 Integrin β 4 Phospho-Regulation Antibody Sampler Kit
- IM5811 Integrin β 3 (Extracellular region) Mouse Monoclonal
- IM5821 Integrin β 1 (Extracellular region) Mouse Monoclonal
- IM5831 Integrin α 2 (Extracellular region) Mouse Monoclonal
- IM5841 Integrin α V (Extracellular region) Mouse Monoclonal
- IM5941 Integrin α L (Extracellular region) Mouse Monoclonal

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Rev 3/19/2018