

**Integrin  $\beta$ 1 (D2E5) Rabbit mAb**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P	H	Endogenous	115, 135	Rabbit IgG	#P05556	3688

**Product Usage Information****Application**

Western Blotting  
Immunohistochemistry (Paraffin)

**Dilution**

1:1000  
1:100 - 1:400

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #72927.

**Specificity/Sensitivity**

Integrin  $\beta$ 1 (D2E5) Rabbit mAb detects endogenous levels of total integrin  $\beta$ 1 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro680 of human integrin  $\beta$ 1 protein.

**Background**

Integrins are  $\alpha/\beta$  heterodimeric cell surface receptors that play a pivotal role in cell adhesion and migration, as well as in growth and survival (1,2). The integrin family contains at least 18  $\alpha$  and 8  $\beta$  subunits that form 24 known integrins with distinct tissue distribution and overlapping ligand specificities (3). Integrins not only transmit signals to cells in response to the extracellular environment (outside-in signaling), but also sense intracellular cues to alter their interaction with the extracellular environment (inside-out signaling) (1,2).

The  $\beta$ 1 subfamily includes 12 distinct integrin proteins that bind to different extracellular matrix molecules (4). Control of extracellular integrin binding influences cell adhesion and migration, while intracellular signaling messages relayed by the  $\beta$ 1 cytoplasmic tail help to regulate cell proliferation, cytoskeletal reorganization, and gene expression (4). Research studies have implicated  $\beta$ 1 integrin in various activities including embryonic development, blood vessel, skin, bone, and muscle formation, as well as tumor metastasis and angiogenesis (4,5).

**Background References**

- Liu, S. et al. (2000) *J Cell Sci* 113 ( Pt 20), 3563-71.
- Hood, J.D. and Cheresch, D.A. (2002) *Nat Rev Cancer* 2, 91-100.
- van der Flier, A. and Sonnenberg, A. (2001) *Cell Tissue Res* 305, 285-98.
- Brakebusch, C. and Fässler, R. (2005) *Cancer Metastasis Rev* 24, 403-11.
- Mettouchi, A. and Meneguzzi, G. (2006) *Eur J Cell Biol* 85, 243-7.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at  $4^{\circ}\text{C}$  with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

**Cross-Reactivity Key**

**H:** Human

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