

Integrin β 1 (102DF5): sc-73610

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16 α and 8 β subunits heterodimerize to produce more than 20 different receptors. Most integrin receptors bind ligands that are components of the extracellular matrix, including Fibronectin, collagen and Vitronectin. Certain integrins can also bind to soluble ligands such as Fibrinogen, or to counterreceptors on adjacent cells such as the intracellular adhesion molecules (ICAMs), leading to aggregation of cells. Ligands serve to cross-link or cluster integrins by binding to adjacent integrin receptors; both receptor clustering and ligand occupancy are necessary for the activation of integrin-mediated responses. In addition to mediating cell adhesion and cytoskeletal organization, integrins function as signaling receptors. Signals transduced by integrins play a role in many biological processes, including cell growth, differentiation, migration and apoptosis.

REFERENCES

- Hynes, R.O. 1992. Integrins: versatility, modulation, and signaling in cell adhesion. *Cell* 69: 11-25.
- Balzac, F., et al. 1993. Expression and functional analysis of a cytoplasmic domain variant of the β 1 integrin subunit. *J. Cell Biol.* 121: 171-178.

CHROMOSOMAL LOCATION

Genetic locus: ITGB1 (human) mapping to 10p11.22.

SOURCE

Integrin β 1 (102DF5) is a mouse monoclonal antibody raised against myometrium tissue extract of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Integrin β 1 (102DF5) is recommended for detection of Integrin β 1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Integrin β 1 siRNA (h): sc-35674, Integrin β 1 shRNA Plasmid (h): sc-35674-SH and Integrin β 1 shRNA (h) Lentiviral Particles: sc-35674-V.

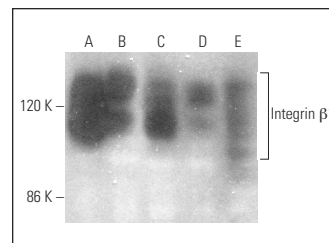
Molecular Weight of Integrin β 1: 138 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

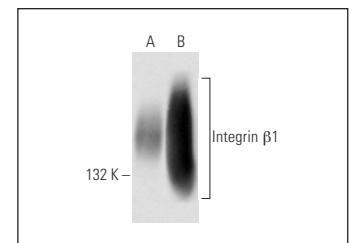
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Integrin β 1 (102DF5): sc-73610. Western blot analysis of Integrin β 1 expression in A549 (A), Jurkat (B), HeLa (C), Raji (D) and Hep G2 (E) whole cell lysates.



Integrin β 1 (102DF5): sc-73610. Western blot analysis of Integrin β 1 expression in U-937 whole cell lysate under reducing (A) and non-reducing (B) conditions.

SELECT PRODUCT CITATIONS

- Jovanovic, M., et al. 2010. Effects of anti-phospholipid antibodies on a human trophoblast cell line (HTR-8/SVneo). *Acta Histochem.* 112: 34-41.
- Cartier-Michaud, A., et al. 2012. Matrix-bound PAI-1 supports cell blebbing via RhoA/ROCK1 signaling. *PLoS ONE* 7: e32204.
- Lin, Y.N., et al. 2015. *Drosophila* homologue of Diaphanous 1 (DIAPH1) controls the metastatic potential of colon cancer cells by regulating microtubule-dependent adhesion. *Oncotarget* 6: 18577-18589.
- Lin, Y.N., et al. 2015. *Ex vivo* aorta patch model for analysis of cellular adhesion. *Tissue Cell* 47: 266-272.
- Langley, S.R., et al. 2017. Extracellular matrix proteomics identifies molecular signature of symptomatic carotid plaques. *J. Clin. Invest.* 127: 1546-1560.
- Wu, Y., et al. 2019. ITGA6 and RPSA synergistically promote pancreatic cancer invasion and metastasis via PI3K and MAPK signaling pathways. *Exp. Cell Res.* 379: 30-47.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



See **Integrin β 1 (A-4): sc-374429** for Integrin β 1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.