

# Integrin $\alpha 5$ (1): sc-136224

## BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane  $\alpha$  and  $\beta$  subunits. The 16  $\alpha$  and 8  $\beta$  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.
- Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in Integrin transmembrane function. *Science* 267: 883-885.
- Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
- Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
- Juliano, R. 1996. Cooperation between soluble factors and Integrin-mediated cell anchorage in the control of cell growth and differentiation. *Bioessays* 18: 911-917.
- Orecchia, A., et al. 2003. Vascular endothelial growth factor receptor-1 is deposited in the extracellular matrix by endothelial cells and is a ligand for the  $\alpha 5/\beta 1$  Integrin. *J. Cell Sci.* 116: 3479-3489.

## CHROMOSOMAL LOCATION

Genetic locus: ITGA5 (human) mapping to 12q13.13.

## SOURCE

Integrin  $\alpha 5$  (1) is a mouse monoclonal antibody raised against amino acids 853-1002 of Integrin  $\alpha 5$  of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG<sub>2a</sub> in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136224 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

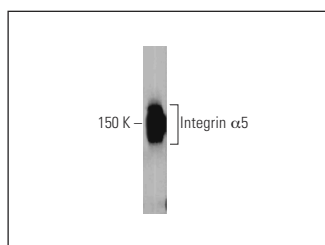
Integrin  $\alpha 5$  (1) is recommended for detection of Integrin  $\alpha 5$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Integrin  $\alpha 5$  siRNA (h): sc-29372, Integrin  $\alpha 5$  shRNA Plasmid (h): sc-29372-SH and Integrin  $\alpha 5$  shRNA (h) Lentiviral Particles: sc-29372-V.

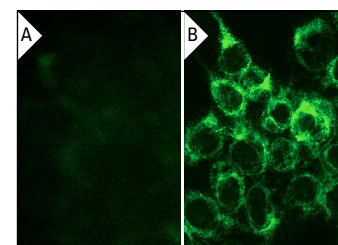
Molecular Weight of Integrin  $\alpha 5$ : 150 kDa.

Positive Controls: HeLa + IL-6 cell lysate: sc-24687, HeLa whole cell lysate: sc-2200 or U-937 cell lysate: sc-2239.

## DATA



Integrin  $\alpha 5$  (1): sc-136224. Western blot analysis of Integrin  $\alpha 5$  expression in HeLa whole cell lysate.



Integrin  $\alpha 5$  (1): sc-136224. Immunofluorescence staining of methanol-fixed untransfected (A) and human Integrin  $\alpha 5$  transfected HEK 293T cells (B).

## SELECT PRODUCT CITATIONS

- Zhang, X., et al. 2015. MicroRNA-26a promotes anoikis in human hepatocellular carcinoma cells by targeting  $\alpha 5$  Integrin. *Oncotarget* 6: 2277-2789.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **Integrin  $\alpha 5$  (C-9): sc-376199** for Integrin  $\alpha 5$  antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.