



# Integrin $\beta 5$ (4AK): sc-130379

## 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 counter receptors 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

1. Hynes, R.O. 1992. Integrins: versatility, modulation, and signaling in cell adhesion. *Cell* 69: 11-25.
2. Miyamoto, S., Akiyama, S.K. and Yamada, K.M. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. *Science* 267: 883-885.
3. Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
4. Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
5. Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. *BioEssays* 18: 911-917.
6. Burns, K.H., et al. 2002. Characterization of integrin expression in the mouse ovary. *Biol. Reprod.* 67: 743-751.
7. Eliceiri, B.P., et al. 2002. Src-mediated coupling of focal adhesion kinase to Integrin  $\alpha_v\beta_5$  in vascular endothelial growth factor signaling. *J. Cell Biol.* 157: 149-160.
8. Lane, N.E., et al. 2005. Mice lacking the Integrin  $\beta 5$  subunit have accelerated osteoclast maturation and increased activity in the estrogen-deficient state. *J. Bone Miner. Res.* 20: 58-66.

## CHROMOSOMAL LOCATION

Genetic locus: ITGB5 (human) mapping to 3q21.2.

## SOURCE

Integrin  $\beta 5$  (4AK) is a mouse monoclonal antibody raised against recombinant Integrin  $\beta 5$  of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Integrin  $\beta 5$  (4AK) is recommended for detection of Integrin  $\beta 5$  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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Integrin  $\beta 5$  siRNA (h): sc-35680, Integrin  $\beta 5$  shRNA Plasmid (h): sc-35680-SH and Integrin  $\beta 5$  shRNA (h) Lentiviral Particles: sc-35680-V.

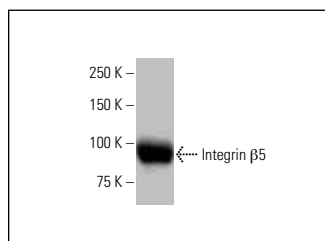
Molecular Weight of Integrin  $\beta 5$ : 100 kDa.

Positive Controls: SW480 cell lysate: sc-2219, HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

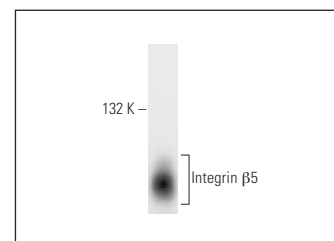
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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).

## DATA



Integrin  $\beta 5$  (4AK): sc-130379. Western blot analysis of Integrin  $\beta 5$  expression in HeLa whole cell lysate.



Integrin  $\beta 5$  (4AK): sc-130379. Western blot analysis of Integrin  $\beta 5$  expression in A549 whole cell lysate.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

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