

# Integrin $\alpha$ Vb (6B4): sc-59971

## 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

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2. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. *Cell* 69: 11-25.
3. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in Integrin transmembrane function. *Science* 267: 883-885.
4. Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
5. Sheppard, D. 1996. Epithelial Integrins. *Bioessays* 18: 655-660.
6. Juliano, R. 1996. Cooperation between soluble factors and Integrin-mediated cell anchorage in the control of cell growth and differentiation. *Bioessays* 18: 911-917.
7. Levy, L., et al. 2000.  $\beta$ 1 Integrins regulate keratinocyte adhesion and differentiation by distinct mechanisms. *Mol. Biol. Cell* 11: 453-466.

## CHROMOSOMAL LOCATION

Genetic locus: ITGA6 (human) mapping to 2q31.1.

## SOURCE

Integrin  $\alpha$ Vb (6B4) is a mouse monoclonal antibody raised against Integrin  $\alpha$ Vb of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> 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.

## RESEARCH USE

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

## APPLICATIONS

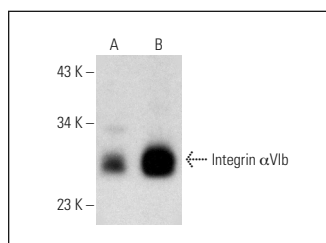
Integrin  $\alpha$ Vb (6B4) is recommended for detection of Integrin  $\alpha$ Vb of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); may cross-react with the basement membrane zone of ducts and acini of salivary gland, kidney tubules, epithelium of colonic crypts; weakly stains sweat glands and sebaceous glands.

Molecular Weight of Integrin  $\alpha$ Va light chain(s): 30 kDa.

Molecular Weight of Integrin  $\alpha$ Va heavy chain(s): 120 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or human salivary gland extract: sc-363762.

## DATA



Integrin  $\alpha$ Vb (6B4): sc-59971. Western blot analysis of Integrin  $\alpha$ Vb expression in Hep G2 whole cell lysate (A) and human salivary gland tissue extract (B).

## SELECT PRODUCT CITATIONS

1. Rambaruth, N.D., et al. 2012. The lectin *Helix pomatia* agglutinin recognizes O-GlcNAc containing glycoproteins in human breast cancer. *Glycobiology* 22: 839-848.

## PROTOCOLS

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