

# Integrin $\beta$ L1 (N-15): sc-84320

## BACKGROUND

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. Integrin  $\beta$ L1 (integrin, beta-like 1), also known as OSCP (osteoblast-specific cysteine-rich protein), TIED (ten integrin EGF-like repeat domain-containing protein) or ITGBL1, is a 494 amino acid secreted protein that is widely expressed in many tissues, but readily detectable only in aorta. Integrin  $\beta$ L1 contains ten tandem EGF-like repeats that are similar to those found in the cysteine rich 'stalk-like' structure of integrin  $\beta$ -subunits.

## REFERENCES

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2. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. *Cell* 69: 11-25.
3. Berdichevsky, F. et al. 1994. Branching morphogenesis of human mammary epithelial cells in collagen gels. *J. Cell Sci.* 1073557-1073568.
4. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. *Science* 267: 883-885.
5. Clark, E.A., et al. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
6. Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
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## CHROMOSOMAL LOCATION

Genetic locus: ITGBL1 (human) mapping to 13q33.1; Itgbl1 (mouse) mapping to 14 E5.

## SOURCE

Integrin  $\beta$ L1 (N-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of Integrin  $\beta$ L1 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84320 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Integrin  $\beta$ L1 (N-15) is recommended for detection of Integrin  $\beta$ L1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other integrin family members.

Integrin  $\beta$ L1 (N-15) is also recommended for detection of Integrin  $\beta$ L1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Integrin  $\beta$ L1 siRNA (h): sc-75342, Integrin  $\beta$ L1 siRNA (m): sc-146248, Integrin  $\beta$ L1 shRNA Plasmid (h): sc-75342-SH, Integrin  $\beta$ L1 shRNA Plasmid (m): sc-146248-SH, Integrin  $\beta$ L1 shRNA (h) Lentiviral Particles: sc-75342-V and Integrin  $\beta$ L1 shRNA (m) Lentiviral Particles: sc-146248-V.

Molecular Weight of Integrin  $\beta$ L1: 54 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, mouse thymus extract: sc-2406 or U-2 OS cell lysate: sc-2295.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## STORAGE

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

## PROTOCOLS

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