

# Integrin $\alpha$ L (27): sc-135951

## 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

1. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. *Cell* 69: 11-25.
2. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in Integrin transmembrane function. *Science* 267: 883-885.
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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. Rose, D.M., et al. 2003. Paxillin binding to the  $\alpha$ 4 Integrin subunit stimulates LFA-1 (Integrin  $\alpha$ L/ $\beta$ 2)-dependent T cell migration by augmenting the activation of focal adhesion kinase/proline-rich tyrosine kinase-2. *J. Immunol.* 170: 5912-5918.
7. Tng, E., et al. 2004. The Integrin  $\alpha$ L/ $\beta$ 2 hybrid domain serves as a link for the propagation of activation signal from its stalk regions to the I-like domain. *J. Biol. Chem.* 279: 54334-54339.
8. Kim, M., et al. 2004. The primacy of affinity over clustering in regulation of adhesiveness of the Integrin  $\alpha$ L $\beta$ 2. *J. Cell Biol.* 167: 1241-1253.

## CHROMOSOMAL LOCATION

Genetic locus: ITGAL (human) mapping to 16p11.2.

## SOURCE

Integrin  $\alpha$ L (27) is a mouse monoclonal antibody raised against amino acids 64-199 of Integrin  $\alpha$ L of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

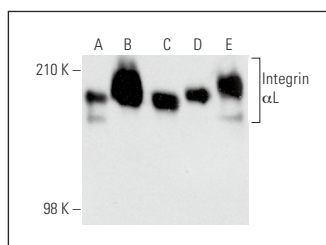
Integrin  $\alpha$ L (27) is recommended for detection of Integrin  $\alpha$ L of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Integrin  $\alpha$ L siRNA (h): sc-35691, Integrin  $\alpha$ L shRNA Plasmid (h): sc-35691-SH and Integrin  $\alpha$ L shRNA (h) Lentiviral Particles: sc-35691-V.

Molecular Weight of Integrin  $\alpha$ L: 180 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182, THP-1 cell lysate: sc-2238 or HL-60 whole cell lysate: sc-2209.

## DATA



Integrin  $\alpha$ L (27): sc-135951. Western blot analysis of Integrin  $\alpha$ L expression in Jurkat (A), THP-1 (B), CCRF-CEM (C), AML-193 (D) and HL-60 (E) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Li, N., et al. 2013. Distinct binding affinities of Mac-1 and LFA-1 in neutrophil activation. *J. Immunol.* 190: 4371-4381.

## 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. Not for resale.

## PROTOCOLS

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