SANTA CRUZ BIOTECHNOLOGY, INC.

# Integrin β1 (h4): 293T Lysate: sc-158638



The Power to Question

## **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. Tsuji, T., et al. 1991. Identification of human galactoprotein b3, an oncogenic transformation-induced membrane glycoprotein, as VLA-3  $\alpha$  subunit: the primary structure of human Integrin  $\alpha$ 3. J. Biochem. 109: 659-665.
- 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.
- Juliano, R. 1996. Cooperation between soluble factors and integrinmediated cell anchorage in the control of cell growth and differentiation. Bioessays 18: 911-917.
- 6. de Melker, A.A., et al. 1997. The A and B variants of the  $\alpha 3$  Integrin subunit: tissue distribution and functional characterization. Lab. Invest. 76: 547-563.
- 7. Hirosaki, T., et al. 2000. Structural requirement of carboxyl-terminal globular domains of Laminin  $\alpha$ -3 chain for promotion of rapid cell adhesion and migration by Laminin-5. J. Biol. Chem. 275: 22495-22502.

## **CHROMOSOMAL LOCATION**

Genetic locus: ITGB1 (human) mapping to 10p11.2.

## **PRODUCT**

Integrin  $\beta$ 1 (h4): 293T Lysate represents a lysate of human Integrin  $\beta$ 1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

#### **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

# **RESEARCH USE**

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

## **APPLICATIONS**

Integrin  $\beta1$  (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive Integrin  $\beta1$  antibodies. Recommended use: 10-20  $\mu$ l per lane

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

#### **PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.