# SANTA CRUZ BIOTECHNOLOGY, INC.

# Integrin β7 (FIB504): sc-23919



## 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.
- Miyamoto, S., Akiyama, S.K., Yamada, K.M. 1995. Synergistic roles for receptor occupancy and aggregation in Integrin transmembrane function. Science 267: 883-885.
- 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.
- Juliano, R. 1996. Cooperation between soluble factors and Integrin-mediated cell anchorage in the control of cell growth and differentiation. Bioessays 18: 911-917.

#### CHROMOSOMAL LOCATION

Genetic locus: ITGB7 (human) mapping to 12q13.13; Itgb7 (mouse) mapping to 15 F3.

#### SOURCE

Integrin  $\beta7$  (FIB504) is a rat monoclonal antibody raised against cells of the TK1 murine T-cell lymphoma.

#### PRODUCT

Each vial contains 200  $\mu$ g lgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for inhibition of cell adhesion to VCAM-1, fibronectin, MadCAM-1, and intestinal epithelium, sc-23919 L, 200  $\mu$ g/0.1 ml.

Integrin  $\beta$ 7 (FIB504) is available conjugated to agarose (sc-23919 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23919 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23919 PE), fluorescein (sc-23919 FITC), Alexa Fluor<sup>®</sup> 488 (sc-23919 AF488), Alexa Fluor<sup>®</sup> 546 (sc-23919 AF546), Alexa Fluor<sup>®</sup> 594 (sc-23919 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-23919 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-23919 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-23919 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Integrin  $\beta$ 7 (FIB504) is recommended for detection of Integrin  $\beta$ 7 of mouse, rat and human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for Integrin  $\beta7$  siRNA (h): sc-35682, Integrin  $\beta7$  siRNA (m): sc-37260, Integrin  $\beta7$  shRNA Plasmid (h): sc-35682-SH, Integrin  $\beta7$  shRNA Plasmid (m): sc-37260-SH, Integrin  $\beta7$  shRNA (h) Lentiviral Particles: sc-35682-V and Integrin  $\beta7$  shRNA (m) Lentiviral Particles: sc-37260-V.

Molecular Weight of Integrin 67: 140 kDa

#### **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 for detailed protocols and support products.

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