

# Integrin $\beta$ 2 (TS1/18): sc-53712

## 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. Law, S.K., et al. 1987. The primary structure of the  $\beta$ -subunit of the cell surface adhesion glycoproteins LFA-1, CR3 and p150,95 and its relationship to the Fibronectin receptor. *EMBO J.* 6: 915-919.
2. Arnaout, M.A., et al. 1990. Point mutations impairing cell surface expression of the common  $\beta$ -subunit (CD18) in a patient with leukocyte adhesion molecule (Leu-CAM) deficiency. *J. Clin. Invest.* 85: 977-981.
3. Hynes, R.O. 1992. Integrins: versatility, modulation, and signaling in cell adhesion. *Cell* 69: 11-25.
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. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
6. Sheppard, D. 1996. Epithelial Integrins. *Bioessays* 18: 655-660.
7. Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. *Bioessays* 18: 911-917.
8. Hogg, N., et al. 1999. A novel leukocyte adhesion deficiency caused by expressed but nonfunctional  $\beta$ 2 Integrins Mac-1 and LFA-1. *J. Clin. Invest.* 103: 97-106.

## CHROMOSOMAL LOCATION

Genetic locus: ITGB2 (human) mapping to 21q22.3.

## SOURCE

Integrin  $\beta$ 2 (TS1/18) is a mouse monoclonal antibody raised against Integrin  $\beta$ 2 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.

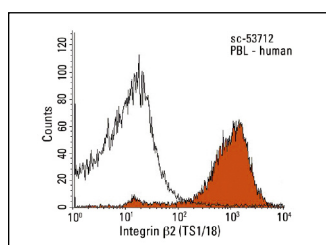
## APPLICATIONS

Integrin  $\beta$ 2 (TS1/18) is recommended for detection of Integrin  $\beta$ 2 of human and porcine origin by flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for Integrin  $\beta$ 2 siRNA (h): sc-29374, Integrin  $\beta$ 2 shRNA Plasmid (h): sc-29374-SH and Integrin  $\beta$ 2 shRNA (h) Lentiviral Particles: sc-29374-V.

Molecular Weight of Integrin  $\beta$ 2: 95 kDa.

## DATA



Integrin  $\beta$ 2 (TS1/18): sc-53712. Indirect FCM analysis of human peripheral blood leukocytes stained with Integrin  $\beta$ 2 (TS1/18), followed by PE-conjugated goat anti-mouse IgG1: sc-3764. Black line histogram represents the isotype control, normal mouse IgG1: sc-3877.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.