SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin β2 (MEM-148): sc-51651

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16 α and 8 β 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. Clark, E.A., et al. 1995. Integrins and signal transduction pathways: the road taken. Science 268: 233-239.
3. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. Science 267: 883-885.
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. Naessens, J., et al. 1997. Nomenclature and characterization of leukocyte differentiation antigens in ruminants. Immunol. Today 18: 365-638.
7. Drbal, K., et al. 2000. Human leukocytes contain a large pool of free forms of CD18. Biochem. Biophys. Res. Commun. 275: 295-299.
8. Drbal, K., et al. 2001. A proteolytically truncated form of free CD18, the common chain of leukocyte integrins, as a novel marker of activated myeloid cells. Blood 98: 1561-1566.
9. Drbal, K., et al. 2001. A novel anti-CD18 mAb recognizes an activation-related epitope and induces a high-affinity conformation in leukocyte integrins. Immunobiology 203: 687-698.

CHROMOSOMAL LOCATION

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

SOURCE

Integrin β2 (MEM-148) is a mouse monoclonal antibody raised against human peripheral blood mononuclear cells.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

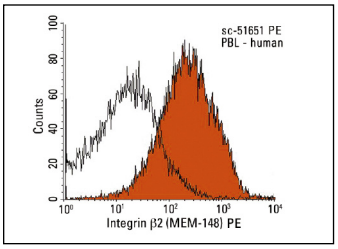
Integrin β2 (MEM-148) is recommended for detection of the epitope exposed on free Integrin β2 (CD18) chains unassociated with CD11 as well as on high-affinity state of LFA-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for Integrin β2 siRNA (h): sc-29374, Integrin β2 shRNA Plasmid (h): sc-29374-SH and Integrin β2 shRNA (h) Lentiviral Particles: sc-29374-V.

Molecular Weight of Integrin β2: 95 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

DATA



Integrin β2 (MEM-148): sc-51651. Indirect FCM analysis of human peripheral blood leukocytes stained with Integrin β2 (MEM-148), followed by PE-conjugated goat anti-mouse IgG_1: sc-3764. Black line histogram represents the isotype control, normal mouse IgG_1: sc-3877.

SELECT PRODUCT CITATIONS

1. Garcia-Bernal, D., et al. 2011. RGS10 restricts upregulation by chemokines of T cell adhesion mediated by α4β1 and αLβ2 integrins. J. Immunol. 187: 1264-1272.
2. Wang, Z., et al. 2013. NFκB pathway mediates vascular smooth muscle response to nicotine. Int. J. Biochem. Cell Biol. 45: 375-383.

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.