SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin αIIb (SZ.22): sc-59923

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

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2. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. Science 267: 883-885.
3. 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.
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. Hantgan, R.R., et al. 2003. Ligand binding promotes the entropy-driven oligomerization of Integrin αIIb β3. J. Biol. Chem. 278: 3417-3426.
7. Goncalves, I., et al. 2003. Integrin αIIb β3-dependent calcium signals regulate platelet-fibrinogen interactions under flow. Involvement of phospholipase C γ2. J. Biol. Chem. 278: 34812-34822.
8. Maxwell, M.J., et al. 2004. SHIP1 and Lyn kinase negatively regulate αIIb β3 signaling in platelets. J. Biol. Chem. 279: 32196-32204.

CHROMOSOMAL LOCATION

Genetic locus: ITGA2B (human) mapping to 17q21.32; Itga2b (mouse) mapping to 11 D-E1.

SOURCE

Integrin αIIb (SZ.22) is a mouse monoclonal antibody raised against washed platelets of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and 1% BSA.

RESEARCH USE

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

APPLICATIONS

Integrin αIIb (SZ.22) is recommended for detection of the α side chain of Integrin αIIb of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for Integrin αIIb siRNA (h): sc-43554.

Molecular Weight of Integrin αIIb: 136 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, human PBL or human platelets.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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