SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α IIb/ β 3 (IVA30): sc-51656



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. Miyamoto, S., Akiyama, S.K. and Yamada, K.M. 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 integrinmediated cell anchorage in the control of cell growth and differentiation. Bioessays 18: 911-917.
- 6. Hantgan, R.R., Lyles, D.S., Mallett, T.C., Rocco, M., Nagaswami, C. and Weisel, J.W. 2003. Ligand binding promotes the entropy-driven oligomerization of Integrin α IIb/ β 3. J. Biol. Chem. 278: 3417-3426.
- 7. Goncalves, I., Hughan, S.C., Schoenwaelder, S.M., Yap, C.L., Yuan, Y. and Jackson, S.P. 2003. Integrin α IIb/ β 3-dependent calcium signals regulate platelet-fibrinogen interactions under flow. Involvement of phospholipase C γ 2. J. Biol. Chem. 278: 34812-34822.
- 8. Maxwell, M.J., Yuan, Y., Anderson, K.E., Hibbs, M.L., Salem, H.H. and Jackson, S.P. 2004. SHIP1 and Lyn kinase negatively regulate Integrin α Ilb/ β 3 signaling in platelets. J. Biol. Chem. 279: 32196-32204.
- 9. Huang, C.L., Cheng, J.C., Liao, C.H., Stern, A., Hsieh, J.T., Wang, C.H., Hsu, H.L. and Tseng, C.P. 2004. Disabled-2 is a negative regulator of Integrin αllb/β3-mediated fibrinogen adhesion and cell signaling. J. Biol. Chem. 279: 42279-42289.

SOURCE

Integrin α IIb/ β 3 (IVA30) is a mouse monoclonal antibody raised against thrombocytes of bovine origin.

PRODUCT

Each vial contains 100 μ g lgG₂ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Integrin α IIb/ β 3 (IVA30) is recommended for detection of Integrin α IIb/ β 3 of bovine origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10⁶ cells).

Molecular Weight of Integrin allb: 136 kDa

Molecular Weight of Integrin β3: 125 kDa.

DATA



Integrin αIIb/β3 (IVA30): sc-51656. Indirect FCM analysis of peripheral blood leukocytes of cow origin stained with Integrin α IIb/ β 3 (IVA30), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG₂.

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.

CONJUGATES

See Integrin allb (B-9): sc-365938 for Integrin allb antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.