

Integrin α IIb/ β 3 (P256): sc-53358

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 counter receptors 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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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 α IIb/ β 3. *J. Biol. Chem.* 278: 3417-3426.
7. Goncalves, I., et al. 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., et al. 2004. SHIP1 and Lyn kinase negatively regulate Integrin α IIb/ β 3 signaling in platelets. *J. Biol. Chem.* 279: 32196-32204.
9. Huang, C.L., et al. 2004. Disabled-2 is a negative regulator of Integrin α IIb/ β 3-mediated fibrinogen adhesion and cell signaling. *J. Biol. Chem.* 279: 42279-42289.

CHROMOSOMAL LOCATION

Genetic locus: ITGA2B (human) mapping to 17q21.31, ITGB3 (human) mapping to 17q21.32.

SOURCE

Integrin α IIb/ β 3 (P256) is a mouse monoclonal antibody raised against peripheral blood mononuclear cells of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Integrin α IIb/ β 3 (P256) is recommended for detection of Integrin α IIb/ β 3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Integrin α IIb: 136 kDa.

Molecular Weight of Integrin β 3: 125 kDa.

Positive Controls: human platelet extract: sc-363773 or HEL 92.1.7 cell lysate: sc-2270.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

1. Zhang, H., et al. 2014. The structure of Rap1 in complex with RIAM reveals specificity determinants and recruitment mechanism. *J. Mol. Cell Biol.* 6: 128-139.
2. Zhao, L., et al. 2016. Computational design of peptide-Au cluster probe for sensitive detection of α IIb/ β 3 Integrin. *Nanoscale* 8: 4203-4208.
3. McCoy, M., et al. 2016. Molecular dynamics of FMRP and other RNA-binding proteins in MEG-01 differentiation: the role of mRNP complexes in non-neuronal development. *Biochem. Cell Biol.* 94: 597-608.

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.



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