SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin αIIb (M-148): sc-7310

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.

CHROMOSOMAL LOCATION

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

SOURCE

Integrin αIIb (M-148) is a mouse monoclonal antibody raised against medulloblastoma tissue.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin αIIb (M-148) is available conjugated to agarose (sc-7310 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7310 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7310 PE), fluorescein (sc-7310 FITC), Alexa Fluor® 488 (sc-7310 AF488), Alexa Fluor® 546 (sc-7310 AF546), Alexa Fluor® 594 (sc-7310 AF594) or Alexa Fluor® 647 (sc-7310 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7310 AF680) or Alexa Fluor® 790 (sc-7310 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Integrin αIIb (M-148) is recommended for detection of Integrin αIIb 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)], 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, Integrin αIIb shRNA Plasmid (h): sc-43554-SH and Integrin αIIb shRNA (h) Lentiviral Particles: sc-43554-V.

Molecular Weight of Integrin αIIb: 136 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

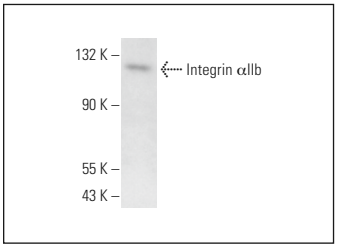
RESEARCH USE

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

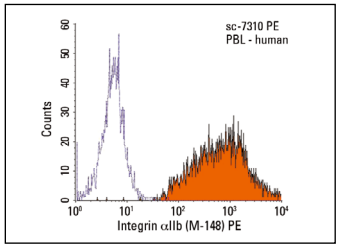
STORAGE

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

DATA



Integrin αIIb (M-148): sc-7310. Western blot analysis of Integrin αIIb expression in Jurkat whole cell lysate.



Integrin αIIb (M-148) PE: sc-7310 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG_1-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Tsuboi, S. 2002. Calcium integrin-binding protein activates platelet Integrin αIIbβ3. J. Biol. Chem. 277: 1919-1923.
2. Mitchell, W.B., et al. 2003. Two novel mutations in the αIIb calcium-binding domains identify hydrophobic regions essential for αIIbβ3 biogenesis. Blood 101: 2268-2276.
3. Sato, Y., et al. 2005. Platelet-derived soluble factors induce human extravillous trophoblast migration and differentiation: platelets are a possible regulator of trophoblast infiltration into maternal spiral arteries. Blood 106: 428-435.
4. Mitchell, W.B., et al. 2006. αIIbβ3 biogenesis is controlled by engagement of αIIb in the calnexin cycle via the N15-linked glycan. Blood 107: 2713-2719.
5. Furukawa, K., et al. 2007. Platelets are novel regulators of neovascularization and luteinization during human corpus luteum formation. Endocrinology 148: 3056-3064.
6. Georgescu, A., et al. 2009. Chronic venous insufficiency is associated with elevated level of circulating microparticles. J. Thromb. Haemost. 7: 1566-1575.
7. Li, J., et al. 2016. Targeted drug delivery to circulating tumor cells via platelet membrane-functionalized particles. Biomaterials 76: 52-65.
8. Kovalenko, T.A., et al. 2021. Asymmetrical forces dictate the distribution and morphology of platelets in blood clots. Cells 10: 584.
9. Grichine, A., et al. 2023. The fate of mitochondria during platelet activation. Blood Adv. 7: 6290-6302.

PROTOCOLS

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