SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin αIIb (MWReg30): sc-19963

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.

CHROMOSOMAL LOCATION

Genetic locus: Itga2b (mouse) mapping to 11 E1.

SOURCE

Integrin αIIb (MWReg30) is a rat monoclonal antibody raised against mouse platelets expressing Integrin αIIb.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for blocking, sc-19963 L, 200 µg/0.1 ml.

Integrin αIIb (MWReg30) is available conjugated to agarose (sc-19963 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-19963 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19963 PE), fluorescein (sc-19963 FITC), Alexa Fluor® 488 (sc-19963 AF488), Alexa Fluor® 546 (sc-19963 AF546), Alexa Fluor® 594 (sc-19963 AF594) or Alexa Fluor® 647 (sc-19963 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-19963 AF680) or Alexa Fluor® 790 (sc-19963 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Integrin αIIb (MWReg30) is recommended for detection of Integrin αIIb of mouse origin by 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), immunohistochemistry (including paraffin-embedded sections) (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 (m): sc-45927, Integrin αIIb shRNA Plasmid (m): sc-45927-SH and Integrin αIIb shRNA (m) Lentiviral Particles: sc-45927-V.

Molecular Weight of Integrin αIIb: 136 kDa.

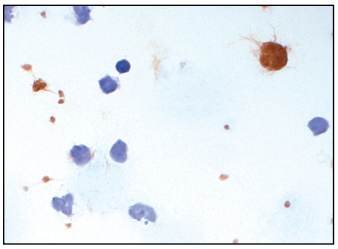
RESEARCH USE

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

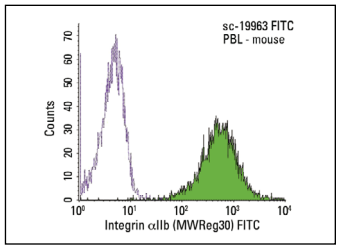
STORAGE

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

DATA



Integrin αIIb (MWReg30): sc-19963. Immunoperoxidase staining of formalin-fixed, paraffin-embedded mouse peripheral blood lymphocytes showing membrane staining of platelets and megakaryocytes.



Integrin αIIb (MWReg30) FITC: sc-19963 FITC. FCM analysis of mouse peripheral blood leukocytes. Black line histogram represents the isotype control, normal rat IgG_1-FITC: sc-2827.

SELECT PRODUCT CITATIONS

1. Qin, X., et al. 2003. Deficiency of the mouse complement regulatory protein mCd59b results in spontaneous hemolytic anemia with platelet activation and progressive male infertility. Immunity 18: 217-227.
2. Boisset, J.C., et al. 2011. *Ex vivo* time-lapse confocal imaging of the mouse embryo aorta. Nat. Protoc. 6: 1792-1805.
3. Machino, Y., et al. 2012. Chemically dimerized intravenous immunoglobulin has potent ameliorating activity in a mouse immune thrombocytopenic purpura model. Biochem. Biophys. Res. Commun. 418: 748-753.
4. Mylona, A., et al. 2013. Genome-wide analysis shows that Ldb1 controls essential hematopoietic genes/pathways in mouse early development and reveals novel players in hematopoiesis. Blood 121: 2902-2913.
5. Chen, Y., et al. 2014. Platelet gene therapy by lentiviral gene delivery to hematopoietic stem cells restores hemostasis and induces humoral immune tolerance in FIX(null) mice. Mol. Ther. 22: 169-177.
6. Zhao, L., et al. 2017. Phosphatidylinositol transfer protein-α in platelets is inconsequential for thrombosis yet is utilized for tumor metastasis. Nat. Commun. 8: 1216.
7. Zeng, D.F., et al. 2018. Autoantibody against integrin αvβ3 contributes to thrombocytopenia by blocking the migration and adhesion of megakaryocytes. J. Thromb. Haemost. 16: 1843-1856.
8. Morodomi, Y., et al. 2020. Modified application of Kawamoto's film method for super-resolution imaging of megakaryocytes in undecalcified bone marrow. Res. Pract. Thromb. Haemost. 4: 86-91.
9. Langrish, C.L., et al. 2021. Preclinical efficacy and anti-inflammatory mechanisms of action of the bruton tyrosine kinase inhibitor rilzabrutinib for immune-mediated disease. J. Immunol. 206: 1454-1468.

PROTOCOLS

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