SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin β1 (TS2/16): sc-53711

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: ITGB1 (human) mapping to 10p11.22; Itgb1 (mouse) mapping to 8 E2.

SOURCE

Integrin β1 (TS2/16) is a mouse monoclonal antibody raised against human CTL line directed against HLA-DR.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin β1 (TS2/16) is available conjugated to agarose (sc-53711 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53711 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53711 PE), fluorescein (sc-53711 FITC), Alexa Fluor® 488 (sc-53711 AF488), Alexa Fluor® 546 (sc-53711 AF546), Alexa Fluor® 594 (sc-53711 AF594) or Alexa Fluor® 647 (sc-53711 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53711 AF680) or Alexa Fluor® 790 (sc-53711 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Integrin β1 (TS2/16) is recommended for detection of Integrin β1 of mouse, rat and 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).

Integrin β1 (TS2/16) is also recommended for detection of Integrin β1 in additional species, including bovine and canine.

Suitable for use as control antibody for Integrin β1 siRNA (h): sc-35674, Integrin β1 siRNA (m): sc-35675, Integrin β1 shRNA Plasmid (h): sc-35674-SH, Integrin β1 shRNA Plasmid (m): sc-35675-SH, Integrin β1 shRNA (h) Lentiviral Particles: sc-35674-V and Integrin β1 shRNA (m) Lentiviral Particles: sc-35675-V.

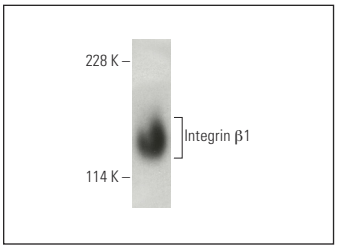
Molecular Weight of Integrin β1: 138 kDa.

Positive Controls: U-937 cell lysate: sc-2239.

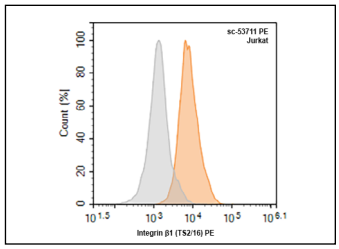
STORAGE

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

DATA



Integrin β1 (TS2/16) HRP: sc-53711 HRP. Direct western blot analysis of Integrin β1 expression in non-reduced U-937 whole cell lysate.



Integrin β1 (TS2/16) PE: sc-53711 PE. FCM analysis of Jurkat cells. Gray histogram represents the isotype control, normal mouse IgG_1: sc-2866.

SELECT PRODUCT CITATIONS

1. Triantis, V., et al. 2006. Identification and characterization of DC-SCRIPT, a novel dendritic cell-expressed member of the zinc finger family of transcriptional regulators. J. Immunol. 176: 1081-1089.
2. Steinberg, F., et al. 2012. SNX17 protects integrins from degradation by sorting between lysosomal and recycling pathways. J. Cell Biol. 197: 219-230.
3. Liu, C.C., et al. 2013. The membrane-proximal KXGFFKR motif of α-integrin mediates chemoresistance. Mol. Cell. Biol. 33: 4334-4345.
4. Sun, T., et al. 2014. Establishment and biological characterization of a dermal mesenchymal stem cells line from bovine. Biosci. Rep. 34 pii: e00101.
5. Hongu, T., et al. 2015. Arf6 regulates tumour angiogenesis and growth through HGF-induced endothelial β1 integrin recycling. Nat. Commun. 6: 7925.
6. Merilahti, P., et al. 2016. Human parechovirus 1 infection occurs via $\alpha_V\beta_1$ integrin. PLoS ONE 11: e0154769.
7. Caldwell, J.M., et al. 2017. Cadherin 26 is an α integrin-binding epithelial receptor regulated during allergic inflammation. Mucosal Immunol. 10: 1190-1201.
8. Choe, S.R., et al. 2018. RCP induces FAK phosphorylation and ovarian cancer cell invasion with inhibition by curcumin. Exp. Mol. Med. 50: 52.
9. Zhao, G., et al. 2019. Cullin5 deficiency promotes small-cell lung cancer metastasis by stabilizing Integrin β1. J. Clin. Invest. 129: 972-987.
10. Mukherjee, R.N., et al. 2019. Reticulon 4a promotes exocytosis in mammalian cells. Mol. Biol. Cell 30: 2349-2357.

RESEARCH USE

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

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