

Integrin β 1 (TS2/16): sc-53711

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 β 1 (TS2/16) is a mouse monoclonal antibody raised against human CTL line directed against HLA-DR.

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.

Integrin β 1 (TS2/16) is available conjugated to agarose (sc-53711 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53711 HRP), 200 μ g/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 μ g/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 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Integrin β 1 (TS2/16) is recommended for detection of Integrin β 1 of mouse, rat and 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Integrin β 1 (TS2/16) is also recommended for detection of Integrin β 1 in additional species, including bovine and canine.

Suitable for use as control antibody for Integrin β 1 siRNA (h): sc-35674, Integrin β 1 siRNA (m): sc-35675, Integrin β 1 shRNA Plasmid (h): sc-35674-SH, Integrin β 1 shRNA Plasmid (m): sc-35675-SH, Integrin β 1 shRNA (h) Lentiviral Particles: sc-35674-V and Integrin β 1 shRNA (m) Lentiviral Particles: sc-35675-V.

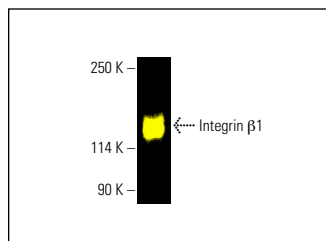
Molecular Weight of Integrin β 1: 138 kDa.

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

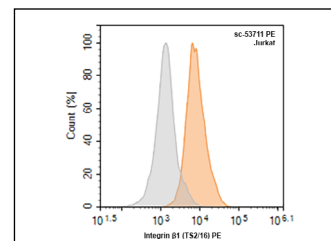
STORAGE

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

DATA



Integrin β 1 (TS2/16): sc-53711. Fluorescent western blot analysis of Integrin β 1 expression in U-937 whole cell lysate under non-reducing conditions. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgG₁ BP-CFL 488: sc-533661.



Integrin β 1 (TS2/16) PE: sc-53711 PE. FCM analysis of Jurkat cells. Gray histogram represents the isotype control, normal mouse IgG₁-PE: sc-2866.

SELECT PRODUCT CITATIONS

- 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.
- Sun, T., et al. 2014. Establishment and biological characterization of a dermal mesenchymal stem cells line from bovine. *Biosci. Rep.* 34: e00101.
- Merilahti, P., et al. 2016. Human parechovirus 1 infection occurs via α v β ₁ integrin. *PLoS ONE* 11: e0154769.
- Caldwell, J.M., et al. 2017. Cadherin 26 is an α integrin-binding epithelial receptor regulated during allergic inflammation. *Mucosal Immunol.* 10: 1190-1201.
- Choe, S.R., et al. 2018. RCP induces FAK phosphorylation and ovarian cancer cell invasion with inhibition by curcumin. *Exp. Mol. Med.* 50: 52.
- Mukherjee, R.N., et al. 2019. Reticulon 4a promotes exocytosis in mammalian cells. *Mol. Biol. Cell* 30: 2349-2357.
- Végh, A.M.D., et al. 2020. Toward biological pacing by cellular delivery of Hcn2/SkM1. *Front. Physiol.* 11: 588679.
- Huang, Y., et al. 2021. Plexin-B2 facilitates glioblastoma infiltration by modulating cell biomechanics. *Commun. Biol.* 4: 145.
- Hadjisavva, R., et al. 2022. Adherens junctions stimulate and spatially guide integrin activation and extracellular matrix deposition. *Cell Rep.* 40: 111091.
- Overeem, A.W., et al. 2023. Efficient and scalable generation of primordial germ cells in 2D culture using basement membrane extract overlay. *Cell Rep. Methods* 3: 100488.

RESEARCH USE

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

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