

Integrin $\beta 1$ (JB1B): sc-59829

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.

SOURCE

Integrin $\beta 1$ (JB1B) is a mouse monoclonal antibody raised against Integrin $\beta 1$ of human origin.

PRODUCT

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

Integrin $\beta 1$ (JB1B) is available conjugated to agarose (sc-59829 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59829 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59829 PE), fluorescein (sc-59829 FITC), Alexa Fluor® 488 (sc-59829 AF488), Alexa Fluor® 546 (sc-59829 AF546), Alexa Fluor® 594 (sc-59829 AF594) or Alexa Fluor® 647 (sc-59829 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-59829 AF680) or Alexa Fluor® 790 (sc-59829 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Integrin $\beta 1$ (JB1B) is recommended for detection of Integrin $\beta 1$ 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1×10^6 cells).

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

Molecular Weight of Integrin $\beta 1$: 138 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, SK-N-SH cell lysate: sc-2410 or HeLa whole cell lysate: sc-2200.

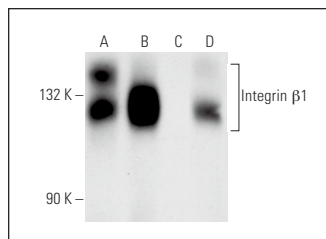
STORAGE

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

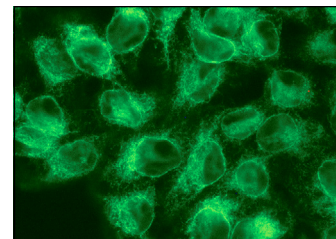
RESEARCH USE

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

DATA



Integrin $\beta 1$ (JB1B): sc-59829. Western blot analysis of Integrin $\beta 1$ expression in SK-N-SH (A), U-87 MG (B), Jurkat (C) and HeLa (D) whole cell lysates.



Integrin $\beta 1$ (JB1B): sc-59829. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane staining.

SELECT PRODUCT CITATIONS

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- Lopez-Sanchez, I., et al. 2015. Focal adhesions are foci for tyrosine-based signal transduction via GIV/girdin and G proteins. *Mol. Biol. Cell* 26: 4313-4324.
- Hennigan, K., et al. 2016. Eosinophil peroxidase activates cells by HER2 receptor engagement and $\beta 1$ -Integrin clustering with downstream MAPK cell signaling. *Clin. Immunol.* 171: 1-11.
- Xiao, W., et al. 2019. High-affinity peptide ligand LXY30 for targeting $\alpha 3 \beta 1$ Integrin in non-small cell lung cancer. *J. Hematol. Oncol.* 12: 56.
- Leite, M., et al. 2020. *Helicobacter pylori* targets the EPHA2 receptor tyrosine kinase in gastric cells modulating key cellular functions. *Cells* 9: 513.
- Deschepper, F.M., et al. 2020. L1CAM as an E-Selectin ligand in colon cancer. *Int. J. Mol. Sci.* 21: 8286.
- Bieri, M., et al. 2021. The RGD-binding Integrins $\alpha v \beta 6$ and $\alpha v \beta 8$ are receptors for mouse adenovirus-1 and -3 infection. *PLoS Pathog.* 17: e1010083.

PROTOCOLS

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

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