## SANTA CRUZ BIOTECHNOLOGY, INC.

# Integrin β1 (12G10): sc-59827



#### BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane  $\alpha$  and  $\beta$  subunits. The 16  $\alpha$  and 8  $\beta$  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  $\beta 1$  (12G10) is a mouse monoclonal antibody raised against purified Integrin  $\beta 1$  from HT1080 fibrosarcoma cell extract of human origin.

#### PRODUCT

Each vial contains 200  $\mu$ g lgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin  $\beta$ 1 (12G10) is available conjugated to agarose (sc-59827 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59827 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59827 PE), fluorescein (sc-59827 FITC), Alexa Fluor\* 488 (sc-59827 AF488), Alexa Fluor\* 546 (sc-59827 AF546), Alexa Fluor\* 594 (sc-59827 AF594) or Alexa Fluor\* 647 (sc-59827 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor\* 680 (sc-59827 AF680) or Alexa Fluor\* 790 (sc-59827 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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#### **APPLICATIONS**

Integrin  $\beta$ 1 (12G10) is recommended for detection of Integrin  $\beta$ 1 of human origin by Western Blotting (non-reducing) (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<sup>6</sup> 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 β1: 138 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, HeLa whole cell lysate: sc-2200 or 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  $\beta$ 1 (12G10): sc-59827. Western blot analysis of Integrin  $\beta$ 1 expression in U-937 whole cell lysate under non-reducing conditions.

# Integrin $\beta 1$ (12G10) Alexa Fluor $^{\circ}$ 647: sc-59827 AF647. FCM analysis of Jurkat cells. Gray histogram represents the isotype control, normal mouse $lgG_1$ : sc-24636.

#### **SELECT PRODUCT CITATIONS**

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- 6. Peng, C., et al. 2018. Response of hPDLSCs on 3D printed PCL/PLGA composite scaffolds *in vitro*. Mol. Med. Rep. 18: 1335-1344.
- 7. Miyagawa, T., et al. 2019. MT1-MMP recruits the ER-Golgi SNARE Bet1 for efficient MT1-MMP transport to the plasma membrane. J. Cell Biol. 218: 3355-3371.
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- Madhusudhan, T., et al. 2020. Podocyte Integrin-β3 and activated protein C coordinately restrict RhoA signaling and ameliorate diabetic nephropathy. J. Am. Soc. Nephrol. 31: 1762-1780.

#### **RESEARCH USE**

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