

# Integrin $\beta 1$ (N-20): sc-6622

## 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 counter receptors 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  $\beta 1$  (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Integrin  $\beta 1$  of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6622 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Integrin  $\beta 1$  (N-20) is recommended for detection of Integrin  $\beta 1$  of mouse, rat, human and *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Integrin  $\beta 1$  (N-20) is also recommended for detection of Integrin  $\beta 1$  in additional species, including equine, canine, bovine, porcine and feline.

Suitable for use as control antibody for Integrin  $\beta 1$  siRNA (h): sc-35674, Integrin  $\beta 1$  siRNA (m): sc-35675, Integrin  $\beta 1$  siRNA (r): sc-72028, Integrin  $\beta 1$  shRNA Plasmid (h): sc-35674-SH, Integrin  $\beta 1$  shRNA Plasmid (m): sc-35675-SH, Integrin  $\beta 1$  shRNA Plasmid (r): sc-72028-SH, Integrin  $\beta 1$  shRNA (h) Lentiviral Particles: sc-35674-V, Integrin  $\beta 1$  shRNA (m) Lentiviral Particles: sc-35675-V and Integrin  $\beta 1$  shRNA (r) Lentiviral Particles: sc-72028-V.

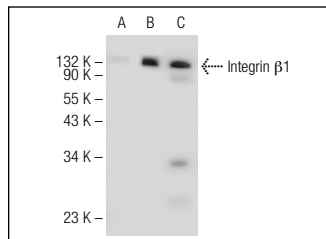
Molecular Weight of Integrin  $\beta 1$ : 138 kDa.

Positive Controls: Integrin  $\beta 1$  (h4): 293T Lysate: sc-158638, HeLa whole cell lysate: sc-2200 or F9 cell lysate: sc-2245.

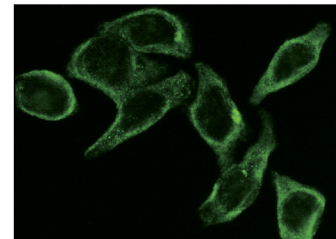
## STORAGE

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

## DATA



Integrin  $\beta 1$  (N-20): sc-6622. Western blot analysis of Integrin  $\beta 1$  expression in non-transfected 293T: sc-117752 (A), human Integrin  $\beta 1$  transfected 293T: sc-158638 (B) and HeLa (C) whole cell lysates.



Integrin  $\beta 1$  (N-20): sc-6622. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane staining.

## SELECT PRODUCT CITATION

- Kojima, T., et al. 2003. Effect of gelatins on human cancer cells *in vitro*. Cancer Biother. Radiopharm. 18: 147-155.
- Eckert, J.M., et al. 2009. Neuregulin-1  $\beta$  and neuregulin-1  $\alpha$  differentially affect the migration and invasion of malignant peripheral nerve sheath tumor cells. Glia 57: 1501-1520.
- Huang, L., et al. 2009. The involvement of  $\text{Ca}^{2+}$  and integrins in directional responses of zebrafish keratocytes to electric fields. J. Cell. Physiol. 219: 162-172.
- Galvagni, F., et al. 2010. Endothelial cell adhesion to the extracellular matrix induces c-Src-dependent VEGFR-3 phosphorylation without the activation of the receptor intrinsic kinase activity. Circ. Res. 106: 1839-1848.
- Tamma, G., et al. 2011. Integrin signaling modulates AQP2 trafficking via Arg-Gly-Asp (RGD) motif. Cell. Physiol. Biochem. 27: 739-748.
- Ihara, Y., et al. 2011. Alteration of integrin-dependent adhesion and signaling in EMT-like MDCK cells established through overexpression of calreticulin. J. Cell. Biochem. 112: 2518-2528.
- MacKay, J.L., et al. 2012. A genetic strategy for the dynamic and graded control of cell mechanics, motility, and matrix remodeling. Biophys. J. 102: 434-442.

## RESEARCH USE

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

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Satisfaction  
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Try **Integrin  $\beta 1$  (A-4): sc-374429** or **Integrin  $\beta 1$  (JB1B): sc-59829**, our highly recommended monoclonal alternatives to Integrin  $\beta 1$  (N-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Integrin  $\beta 1$  (A-4): sc-374429**.