SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin β1 (L-16): sc-9936

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 (L-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping extracellular domain of Integrin β1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9936 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Integrin β1 (L-16) is recommended for detection of Integrin β1 of human and *Xenopus laevis* and, to a lesser extent, mouse, rat 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), immunohistochemistry (including paraffin-embedded sections) (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 β1 (L-16) is also recommended for detection of Integrin β1 in additional species, including equine, canine, bovine, porcine and feline.

Suitable for use as control antibody for Integrin β1 siRNA (h): sc-35674, Integrin β1 siRNA (m): sc-35675, Integrin β1 siRNA (r): sc-72028Integrin β1 shRNA Plasmid (h): sc-35674-SH, Integrin β1 shRNA Plasmid (m): sc-35675-SH, Integrin β1 shRNA Plasmid (r): sc-72028-SHIntegrin β1 shRNA (h) Lentiviral Particles: sc-35674-V, Integrin β1 shRNA (m) Lentiviral Particles: sc-35675-V and Integrin β1 shRNA (r) Lentiviral Particles: sc-72028-V.

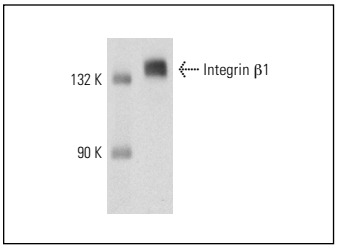
Molecular Weight of Integrin β1: 138 kDa.

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

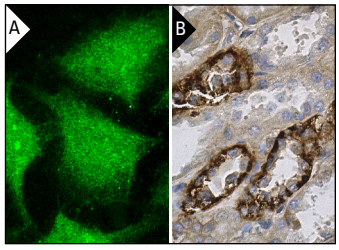
STORAGE

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

DATA



Integrin β1 (L-16): sc-9936. Western blot analysis of Integrin β1 expression in U-87 MG whole cell lysate.



Integrin β1 (L-16): sc-9936. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Wallquist, W., et al. 2004. Dorsal root ganglion neurons up-regulate the expression of laminin-associated integrins after peripheral but not central axotomy. J. Comp. Neurol. 480: 162-169.
2. Anderson, K. and Ferreira, A. 2004. α1 Integrin activation: a link between β-amyloid deposition and neuronal death in aging hippocampal neurons. J. Neurosci. Res. 75: 688-697.
3. Sato, T., et al. 2005. CD26 regulates p38 mitogen-activated protein kinase-dependent phosphorylation of Integrin β1, adhesion to extracellular matrix, and tumorigenicity of T-anaplastic large cell lymphoma Karpas 299. Cancer Res. 65: 6950-6956.
4. Bajanca, F., et al. 2006. Integrin α6β1-laminin interactions regulate early myotome formation in the mouse embryo. Development 133: 1635-1644.
5. Keophiphath, M., et al. 2009. Macrophage-secreted factors promote a profibrotic phenotype in human preadipocytes. Mol. Endocrinol. 23: 11-24.
6. Grabowska, I., et al. 2010. Comparison of satellite cell derived myoblasts and C2C12 differentiation in two- and three-dimensional cultures: changes in adhesion protein expression. Cell Biol. Int. 35: 125-133.
7. ten Berge, D., et al. 2011. Embryonic stem cells require Wnt proteins to prevent differentiation to epiblast stem cells. Nat. Cell Biol. 13: 1070-1075.

RESEARCH USE

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