

Integrin β 1 (HM β 1-1): sc-19656

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16α and 8β 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.

REFERENCES

- Hynes, R.O. 1992. Integrins: versatility, modulation, and signaling in cell adhesion. *Cell* 69: 11-25.
- Balzac, F., et al. 1993. Expression and functional analysis of a cytoplasmic domain variant of the β 1 Integrin subunit. *J. Cell Biol.* 121: 171-178.
- Balzac, F., et al. 1994. Expression of β 1B Integrin isoform in CHO cells results in a dominant negative effect on cell adhesion and motility. *J. Cell Biol.* 127: 557-565.

CHROMOSOMAL LOCATION

Genetic locus: Itgb1 (mouse) mapping to 8 E2.

SOURCE

Integrin β 1 (HM β 1-1) is an Armenian hamster monoclonal antibody raised against purified mouse Integrin β 1.

PRODUCT

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

Integrin β 1 (HM β 1-1) is available conjugated to either phycoerythrin (sc-19656 PE) or fluorescein (sc-19656 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Integrin β 1 (HM β 1-1) is recommended for detection of Integrin β 1 of mouse 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 β 1 siRNA (m): sc-35675, Integrin β 1 shRNA Plasmid (m): sc-35675-SH and Integrin β 1 shRNA (m) Lentiviral Particles: sc-35675-V.

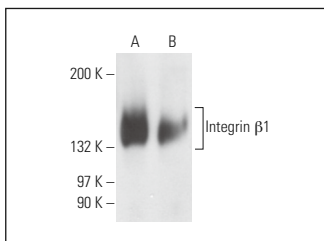
Molecular Weight of Integrin β 1: 130 kDa.

Positive Controls: F9 cell lysate: sc-2245 or c4 whole cell lysate: sc-364186.

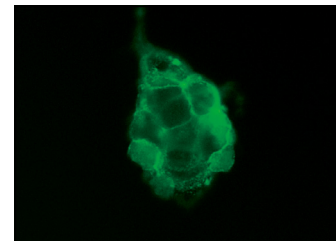
STORAGE

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 (HM β 1-1): sc-19656. Western blot analysis of Integrin β 1 expression in F9 (A) and C4 (B) whole cell lysates under non-reducing conditions.



Integrin β 1 (HM β 1-1): sc-19656. Immunofluorescence staining of methanol-fixed F9 cells showing cytoplasmic and membrane staining.

SELECT PRODUCT CITATIONS

- Nobumoto, A., et al. 2008. Galectin-9 suppresses tumor metastasis by blocking adhesion to endothelium and extracellular matrices. *Glycobiology* 18: 735-744.
- Piechocki, M.P. 2008. A stable explant culture of HER2/neu invasive carcinoma supported by α -smooth muscle Actin expressing stromal cells to evaluate therapeutic agents. *BMC Cancer* 8: 119.
- Shewchuk, L.J., et al. 2010. Integrin β 3 prevents apoptosis of HL-1 cardiomyocytes under conditions of oxidative stress. *Can. J. Physiol. Pharmacol.* 88: 324-330.
- Shi, F., et al. 2016. Cellular prion protein promotes neuronal differentiation of adipose-derived stem cells by upregulating miRNA-124. *J. Mol. Neurosci.* 59: 48-55.
- Xia, M., et al. 2019. HAND2-mediated epithelial maintenance and integrity in cardiac outflow tract morphogenesis. *Development* 146: dev177477.
- Kato, M. and Sato, K. 2025. A microfluidic-based cell-stretching culture device that allows for easy preparation of slides for observation with high-magnification objective lenses. *Micromachines* 16: 93.

RESEARCH USE

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

PROTOCOLS

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



See **Integrin β 1 (A-4): sc-374429** for Integrin β 1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.