

Integrin $\beta 3$ (B-7): sc-46655

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: ITGB3 (human) mapping to 17q21.32; Itgb3 (mouse) mapping to 11 E1.

SOURCE

Integrin $\beta 3$ (B-7) is a mouse monoclonal antibody raised against amino acids 635-730 mapping near the C-terminus of Integrin $\beta 3$ of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin $\beta 3$ (B-7) is available conjugated to agarose (sc-46655 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-46655 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-46655 PE), fluorescein (sc-46655 FITC), Alexa Fluor® 488 (sc-46655 AF488), Alexa Fluor® 546 (sc-46655 AF546), Alexa Fluor® 594 (sc-46655 AF594) or Alexa Fluor® 647 (sc-46655 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-46655 AF680) or Alexa Fluor® 790 (sc-46655 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Integrin $\beta 3$ (B-7) is recommended for detection of Integrin $\beta 3$ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:5000), 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

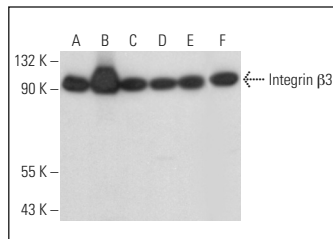
Suitable for use as control antibody for Integrin $\beta 3$ siRNA (h): sc-29375, Integrin $\beta 3$ siRNA (m): sc-35677, Integrin $\beta 3$ siRNA (r): sc-63292, Integrin $\beta 3$ shRNA Plasmid (h): sc-29375-SH, Integrin $\beta 3$ shRNA Plasmid (m): sc-35677-SH, Integrin $\beta 3$ shRNA Plasmid (r): sc-63292-SH, Integrin $\beta 3$ shRNA (h) Lentiviral Particles: sc-29375-V, Integrin $\beta 3$ shRNA (m) Lentiviral Particles: sc-35677-V and Integrin $\beta 3$ shRNA (r) Lentiviral Particles: sc-63292-V.

Molecular Weight of Integrin $\beta 3$: 125 kDa.

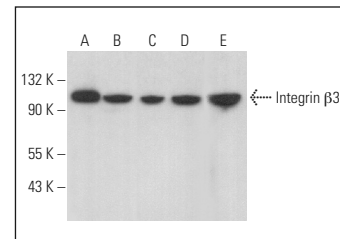
STORAGE

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

DATA



Integrin $\beta 3$ (B-7): sc-46655. Western blot analysis of Integrin $\beta 3$ expression in Jurkat (A), HUV-EC-C (B), MDA-MB-231 (C), THP-1 (D), HeLa (E) and Raji (F) whole cell lysates.



Integrin $\beta 3$ (B-7): sc-46655. Western blot analysis of Integrin $\beta 3$ expression in Jurkat (A), TK-1 (B), C2C12 (C), Neuro-2A (D) and HEL 92.1.7 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

- Chang, S.F., et al. 2009. BMP-4 induction of arrest and differentiation of osteoblast-like cells via p21^{CIP1} and p27^{KIP1} regulation. *Mol. Endocrinol.* 23: 1827-1838.
- Chan, K.C., et al. 2014. Mulberry water extracts inhibit atherosclerosis through suppression of the Integrin- $\beta 3$ /focal adhesion kinase complex and downregulation of nuclear factor κB signaling *in vivo* and *in vitro*. *J. Agric. Food Chem.* 62: 9463-9471.
- Shen, Y., et al. 2015. Effect of surface chemistry on the integrin induced pathway in regulating vascular endothelial cells migration. *Colloids Surf. B Biointerfaces* 126: 188-197.
- Liu, S., et al. 2016. Fluid shear stress induces epithelial-mesenchymal transition (EMT) in Hep-2 cells. *Oncotarget* 7: 32876-32892.
- Yu, H., et al. 2018. Inhibition of cell migration by focal adhesion kinase: time-dependent difference in integrin-induced signaling between endothelial and hepatoblastoma cells. *Int. J. Mol. Med.* 41: 2573-2588.
- Ahat, E., et al. 2019. GRASP depletion-mediated Golgi destruction decreases cell adhesion and migration via the reduction of $\alpha 5 \beta 1$ integrin. *Mol. Biol. Cell* 30: 766-777.
- Fu, Y., et al. 2020. Abnormally activated OPN/integrin $\alpha V \beta 3$ /FAK signalling is responsible for EGFR-TKI resistance in EGFR mutant non-small-cell lung cancer. *J. Hematol. Oncol.* 13: 169.
- Kovacheva, M., et al. 2021. Conditional knockdown of integrin $\beta 3$ reveals its involvement in osteolytic and soft tissue lesions of breast cancer skeletal metastasis. *J. Cancer Res. Clin. Oncol.* 147: 361-371.

RESEARCH USE

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

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