

Integrin $\beta 3$ (D-11): sc-365679

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

1. Davies, J., et al. 1989. The osteoclast functional antigen, implicated in the regulation of bone resorption, is biochemically related to the Vitronectin receptor. *J. Cell Biol.* 109: 1817-1826.
2. Kieffer, N. and Phillips, D.R. 1990. Platelet membrane glycoproteins: functions in cellular interactions. *Annu. Rev. Cell Biol.* 6: 329-357.

CHROMOSOMAL LOCATION

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

SOURCE

Integrin $\beta 3$ (D-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 761-788 at the C-terminus of Integrin $\beta 3$ of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin $\beta 3$ (D-11) is available conjugated to agarose (sc-365679 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365679 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365679 PE), fluorescein (sc-365679 FITC), Alexa Fluor® 488 (sc-365679 AF488), Alexa Fluor® 546 (sc-365679 AF546), Alexa Fluor® 594 (sc-365679 AF594) or Alexa Fluor® 647 (sc-365679 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365679 AF680) or Alexa Fluor® 790 (sc-365679 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365679 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

Integrin $\beta 3$ (D-11) is recommended for detection of Integrin $\beta 3$ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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), 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).

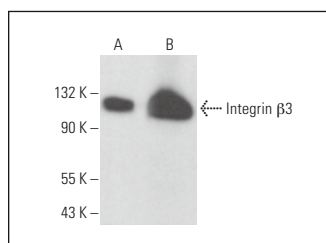
Integrin $\beta 3$ (D-11) is also recommended for detection of Integrin $\beta 3$ in additional species, including equine, canine, bovine, porcine and avian.

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.

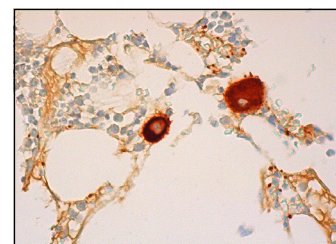
Molecular Weight of Integrin $\beta 3$: 125 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, HEL 92.1.7 cell lysate: sc-2270 or MDA-MB-231 cell lysate: sc-2232.

DATA



Integrin $\beta 3$ (D-11): sc-365679. Western blot analysis of Integrin $\beta 3$ expression in HUV-EC-C (A) and HEL 92.1.7 (B) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Integrin $\beta 3$ (D-11): sc-365679. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of megakaryocytes.

SELECT PRODUCT CITATIONS

1. Shen, Z., et al. 2013. Novel focal adhesion protein kindlin-2 promotes the invasion of gastric cancer cells through phosphorylation of Integrin $\beta 1$ and $\beta 3$. *J. Surg. Oncol.* 108: 106-112.
2. Seong, J., et al. 2018. Side branching and luminal lineage commitment by ID2 in developing mammary glands. *Development* 145: dev165258.
3. Kim, J., et al. 2020. Topological adaptation of transmembrane domains to the force-modulated lipid bilayer is a basis of sensing mechanical force. *Curr. Biol.* 30: 1614-1625.e5.
4. Du, J.K., et al. 2021. A novel role of kallikrein-related peptidase 8 in the pathogenesis of diabetic cardiac fibrosis. *Theranostics* 11: 4207-4231.

RESEARCH USE

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