

Integrin $\beta 3$ (PM6/13): sc-52589

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.

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. 1991. Platelet membrane glycoproteins: functions in cellular interactions. *Annu. Rev. Cell Biol.* 6: 329-357.
3. Bray, P.F. 1995. Inherited diseases of platelet glycoproteins: considerations for rapid molecular characterization. *Thromb. Haemost.* 72: 492-502.
4. Schlossman, S.L., et al, eds. 1995. *Leukocyte Typing V: White Cell Differentiation Antigens.* Oxford: Oxford University Press.
5. Law, D.A., et al. 1996. Outside-in integrin signal transduction. α IIb β 3- (GP IIb IIIa) tyrosine phosphorylation induced by platelet aggregation. *J. Biol. Chem.* 271: 10811-10815.
6. Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
7. Barclay, A.N., et al. 1997. *The Leukocyte Antigens Facts Book*, 2nd Edition, CD61 Section. New York: Academic Press, 293.

CHROMOSOMAL LOCATION

Genetic locus: ITGB2 (human) mapping to 17q21.32.

SOURCE

Integrin $\beta 3$ (PM6/13) is a mouse monoclonal antibody raised against platelet plasma membrane of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

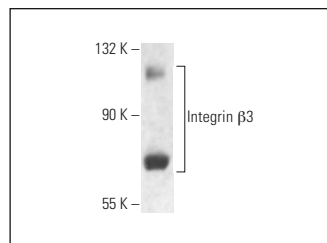
Integrin $\beta 3$ (PM6/13) is recommended for detection of Integrin $\beta 3$ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

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

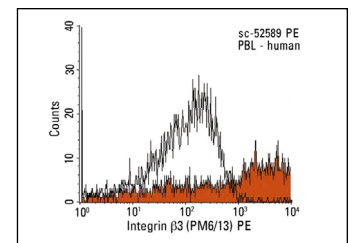
Molecular Weight of Integrin $\beta 3$: 125 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232 or human platelet extract: sc-363773.

DATA




Integrin $\beta 3$ (PM6/13): sc-52589. Western blot analysis of Integrin $\beta 3$ expression in human platelet extract.



Integrin $\beta 3$ (PM6/13): sc-52589. Indirect FCM analysis of human peripheral blood leukocytes stained with Integrin $\beta 3$ (PM6/13), followed by PE-conjugated goat anti-mouse IgG₁: sc-3764. Black line histogram represents the isotype control, normal mouse IgG₁: sc-3877.

SELECT PRODUCT CITATIONS

1. Chen, M., et al. 2014. Isthmin targets cell-surface GRP78 and triggers apoptosis via induction of mitochondrial dysfunction. *Cell Death Differ.* 21: 797-810.
2. Dzielulska, D. and Nycz, E. 2016. Disturbed integrin expression in the vascular media in CADASIL. *Folia Neuropathol.* 54: 375-381.
3. Jin, S.H., et al. 2019. *M. leprae* interacts with the human epidermal keratinocytes, neonatal (HEKn) via the binding of laminin-5 with α -dystroglycan, integrin- $\beta 1$, or - $\beta 4$. *PLoS Negl. Trop. Dis.* 13: e0007339.
4. Sun, F., et al. 2019. Interleukin-8 promotes Integrin $\beta 3$ upregulation and cell invasion through PI3K/Akt pathway in hepatocellular carcinoma. *J. Exp. Clin. Cancer Res.* 38: 449.



See **Integrin $\beta 3$ (D-11): sc-365679** for Integrin $\beta 3$ antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.