SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin β3 (F-11): sc-7311

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: Itgb3 (mouse) mapping to 11 E1.

SOURCE

Integrin β3 (F-11) is a mouse monoclonal antibody raised against an SD rat bone cell suspension.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin β3 (F-11) is available conjugated to either phycoerythrin (sc-7311 PE) or fluorescein (sc-7311 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Integrin β3 (F-11) is recommended for detection of Integrin β3 of mouse and rat origin by 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) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for Integrin β3 siRNA (m): sc-35677, Integrin β3 siRNA (r): sc-63292, Integrin β3 shRNA Plasmid (m): sc-35677-SH, Integrin β3 shRNA Plasmid (r): sc-63292-SH, Integrin β3 shRNA (m) Lentiviral Particles: sc-35677-V and Integrin β3 shRNA (r) Lentiviral Particles: sc-63292-V.

Molecular Weight of Integrin β3: 125 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

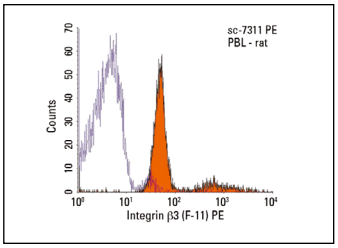
STORAGE

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.

DATA



Integrin β3 (F-11) PE: sc-7311 PE. FCM analysis of rat peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG_1-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Witzenbichler, B., et al. 1999. Regulation of smooth muscle cell migration and integrin expression by the Gax transcription factor. J. Clin. Invest. 104: 1469-1480.
2. Greenwood, J.A., et al. 2000. Restructuring of focal adhesion plaques by PI 3-kinase. Regulation by PtdIns (3,4,5)-p(3) binding to α-actinin. J. Cell Biol. 150: 627-642.
3. Shimamura, N., et al. 2006. Inhibition of integrin $\alpha_v\beta_3$ ameliorates focal cerebral ischemic damage in the rat middle cerebral artery occlusion model. Stroke 37: 1902-1909.
4. de Nigris, F., et al. 2006. Cooperation between Myc and YY1 provides novel silencing transcriptional targets of α3/β1 Integrin in tumour cells. Oncogene 26: 382-394.
5. Thews, O., et al. 2007. Impact of therapeutically induced reactive oxygen species and radical scavenging by α-tocopherol on tumor cell adhesion. Oncol. Rep. 18: 965-971.
6. Thews, O., et al. 2009. Impact of reactive oxygen species on the expression of adhesion molecules *in vivo*. Adv. Exp. Med. Biol. 645: 95-100.
7. Uehara, K. and Uehara, A. 2014. Integrin αvβ5 in endothelial cells of rat splenic sinus: an immunohistochemical and ultrastructural study. Cell Tissue Res. 356: 183-193.
8. Pankov, R., et al. 2019. Characterization of stitch adhesions: Fibronectin-containing cell-cell contacts formed by fibroblasts. Exp. Cell Res. 384: 111616.

CONJUGATES

See **Integrin β3 (D-11): sc-365679** for Integrin β3 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.