SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin β3 (BV4): sc-52685

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

SOURCE

Integrin β3 (BV4) is a mouse monoclonal antibody raised against full-length Integrin β3 from endothelial cells of human origin.

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 (BV4) is available conjugated to fluorescein (sc-52685 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Integrin β3 (BV4) is recommended for detection of Integrin β3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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), immunohistochemistry (including paraffin-embedded sections) (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 (h): sc-29375, Integrin β3 siRNA (m): sc-35677, Integrin β3 siRNA (r): sc-63292, Integrin β3 shRNA Plasmid (h): sc-29375-SH, Integrin β3 shRNA Plasmid (m): sc-35677-SH, Integrin β3 shRNA Plasmid (r): sc-63292-SH, Integrin β3 shRNA (h) Lentiviral Particles: sc-29375-V, 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.

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

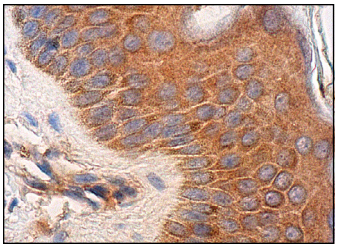
STORAGE

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

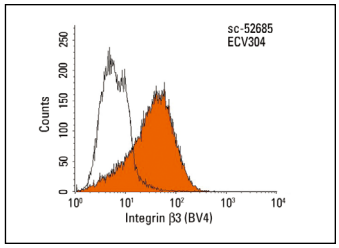
RESEARCH USE

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

DATA



Integrin β3 (BV4): sc-52685. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells.



Integrin β3 (BV4): sc-52685. Indirect FCM analysis of ECV304 cells stained with Integrin β3 (BV4), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG_1: sc-3877.

SELECT PRODUCT CITATIONS

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2. Su, H., et al. 2010. Reduced expression of Integrin αvβ8 is associated with brain arteriovenous malformation pathogenesis. Am. J. Pathol. 176: 1018-1027.
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4. Katoh, D., et al. 2013. Binding of αvβ1 and αvβ6 Integrins to tenascin-C induces epithelial-mesenchymal transition-like change of breast cancer cells. Oncogenesis 2: e65.
5. Kawai, R., et al. 2014. Mouse ES cells have a potential to differentiate into odontoblast-like cells using hanging drop method. Oral Dis. 20: 395-403.
6. Ahn, E.H., et al. 2014. Spatial control of adult stem cell fate using nanotopographic cues. Biomaterials 35: 2401-2410.
7. Villegas-Pineda, J.C., et al. 2017. The translational blocking of α5 and α6 Integrin subunits affects migration and invasion, and increases sensitivity to carboplatin of SKOV-3 ovarian cancer cell line. Exp. Cell Res. 351: 127-134.
8. Shukla, V., et al. 2019. Microtubule depolymerization attenuates Wnt4/CaMKIIα signaling in mouse uterus and leads to implantation failure. Reproduction 158: 47-59.
9. Wong, S.H.D., et al. 2023. Mechanical manipulation of cancer cell tumorigenicity via heat shock protein signaling. Sci. Adv. 9: eadg9593.