

# Integrin $\beta 3$ (BV4): sc-52685

## BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane  $\alpha$  and  $\beta$  subunits. The 16  $\alpha$  and 8  $\beta$  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  $\beta 3$  (BV4) is a mouse monoclonal antibody raised against full-length Integrin  $\beta 3$  from endothelial cells of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin  $\beta 3$  (BV4) is available conjugated to fluorescein (sc-52685 FITC), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

Integrin  $\beta 3$  (BV4) is recommended for detection of Integrin  $\beta 3$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\mu$ g per  $1 \times 10^6$  cells).

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

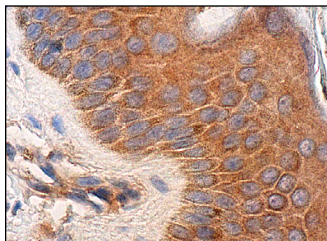
## STORAGE

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

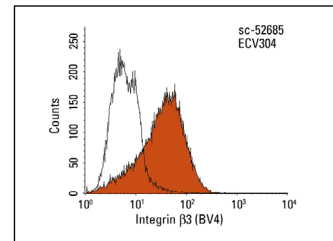
## RESEARCH USE

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

## DATA



Integrin  $\beta 3$  (BV4): sc-52685. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells.



Integrin  $\beta 3$  (BV4): sc-52685. Indirect FCM analysis of ECV304 cells stained with Integrin  $\beta 3$  (BV4), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG<sub>1</sub>: sc-3877.

## SELECT PRODUCT CITATIONS

- Wang, H., et al. 2009. Using dual-tracer PET to predict the biologic behavior of human colorectal cancer. *J. Nucl. Med.* 50: 1857-1864.
- Tang, N.H., et al. 2010. N-terminal and C-terminal heparin-binding domain polypeptides derived from Fibronectin reduce adhesion and invasion of liver cancer cells. *BMC Cancer* 10: 552.
- Su, H., et al. 2010. Reduced expression of Integrin  $\alpha v \beta 8$  is associated with brain arteriovenous malformation pathogenesis. *Am. J. Pathol.* 176: 1018-1027.
- Wang, H., et al. 2013. Evaluation of  $^{18}$ F-FDG and  $^{18}$ F-FLT for monitoring therapeutic responses of colorectal cancer cells to radiotherapy. *Eur. J. Radiol.* 82: e484-91.
- Kato, D., et al. 2013. Binding of  $\alpha v \beta 1$  and  $\alpha v \beta 6$  Integrins to tenascin-C induces epithelial-mesenchymal transition-like change of breast cancer cells. *Oncogenesis* 2: e65.
- 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.
- Ahn, E.H., et al. 2014. Spatial control of adult stem cell fate using nanotopographic cues. *Biomaterials* 35: 2401-2410.
- Villegas-Pineda, J.C., et al. 2017. The translational blocking of  $\alpha 5$  and  $\alpha 6$  Integrin subunits affects migration and invasion, and increases sensitivity to carboplatin of SKOV-3 ovarian cancer cell line. *Exp. Cell Res.* 351: 127-134.
- Shukla, V., et al. 2019. Microtubule depolymerization attenuates WNT4/CaMKII $\alpha$  signaling in mouse uterus and leads to implantation failure. *Reproduction* 158: 47-59.

## CONJUGATES

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