

# Integrin $\beta 4$ (A9): sc-13543

## 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. Integrin  $\beta 4$  (ITGB4), also known as CD104, is a 1,822 amino acid single-pass type I membrane protein belonging to the Integrin  $\beta$  chain family. Known to associate with Integrin  $\alpha 6$ , Integrin  $\beta 4$  functions as a receptor for Laminin and is predominantly expressed by epithelia. Integrin  $\beta 4$  exists as five alternatively spliced isoforms that are encoded by a gene located on human chromosome 17q25.1.

## CHROMOSOMAL LOCATION

Genetic locus: ITGB4 (human) mapping to 17q25.1.

## SOURCE

Integrin  $\beta 4$  (A9) is a mouse monoclonal antibody raised against full length Integrin  $\beta 4$  of human origin.

## PRODUCT

Each vial contains 200  $\mu\text{g}$  IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin  $\beta 4$  (A9) is available conjugated to agarose (sc-13543 AC), 500  $\mu\text{g}$ /0.25 ml agarose in 1 ml, for IP; to HRP (sc-13543 HRP), 200  $\mu\text{g}/\text{ml}$ , for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13543 PE), fluorescein (sc-13543 FITC), Alexa Fluor<sup>®</sup> 488 (sc-13543 AF488), Alexa Fluor<sup>®</sup> 546 (sc-13543 AF546), Alexa Fluor<sup>®</sup> 594 (sc-13543 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-13543 AF647), 200  $\mu\text{g}/\text{ml}$ , for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-13543 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-13543 AF790), 200  $\mu\text{g}/\text{ml}$ , for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Integrin  $\beta 4$  (A9) is recommended for detection of Integrin  $\beta 4$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu\text{g}$  per 100-500  $\mu\text{g}$  of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1  $\mu\text{g}$  per  $1 \times 10^6$  cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Integrin  $\beta 4$  siRNA (h): sc-35678, Integrin  $\beta 4$  shRNA Plasmid (h): sc-35678-SH and Integrin  $\beta 4$  shRNA (h) Lentiviral Particles: sc-35678-V.

Molecular Weight of Integrin  $\beta 4$ : 205 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, MCF7 whole cell lysate: sc-2206 or SW480 cell lysate: sc-2219.

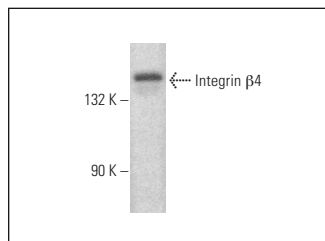
## RESEARCH USE

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

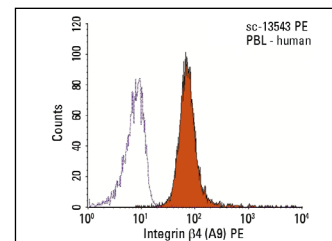
## STORAGE

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

## DATA



Integrin  $\beta 4$  (A9): sc-13543. Western blot analysis of Integrin  $\beta 4$  expression in MOLT-4 whole cell lysate.



Integrin  $\beta 4$  (A9) PE: sc-13543 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG<sub>2a</sub> PE: sc-2867.

## SELECT PRODUCT CITATIONS

- Jones, C., et al. 2004. Expression profiling of purified normal human luminal and myoepithelial breast cells: identification of novel prognostic markers for breast cancer. *Cancer Res.* 64: 3037-3045.
- Grigoriadis, A., et al. 2006. Establishment of the epithelial-specific transcriptome of normal and malignant human breast cells based on MPSS and array expression data. *Breast Cancer Res.* 8: R56.
- Lam, Y.W., et al. 2010. Comprehensive identification and modified-site mapping of S-nitrosylated targets in prostate epithelial cells. *PLoS ONE* 5: e9075.
- Kim, D.H., et al. 2013. Stimuli-responsive magnetic nanomicelles as multi-functional heat and cargo delivery vehicles. *Langmuir* 29: 7425-7432.
- Bernardes, N., et al. 2014. High-throughput molecular profiling of a P-cadherin overexpressing breast cancer model reveals new targets for the anti-cancer bacterial protein azurin. *Int. J. Biochem. Cell Biol.* 50: 1-9.
- Micocci, K.C., et al. 2016. ADAM9 silencing inhibits breast tumor cells transmigration through blood and lymphatic endothelial cells. *Biochimie* 128-129: 174-182.
- Frolikova, M., et al. 2019. Addressing the compartmentalization of specific integrin heterodimers in mouse sperm. *Int. J. Mol. Sci.* 20: 1004.
- Nie, H., et al. 2020. Use of lung-specific exosomes for miRNA-126 delivery in non-small cell lung cancer. *Nanoscale* 12: 877-887.
- Tripathi, R., et al. 2020. A novel topical ophthalmic formulation to mitigate acute mustard Gas keratopathy *in vivo*: a pilot study. *Transl. Vis. Sci. Technol.* 9: 6.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA