

# Integrin $\beta 2$ (CTB104): sc-8420

## 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.

## REFERENCES

1. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. *Cell* 69: 11-25.
2. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. *Science* 267: 883-885.
3. Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.

## CHROMOSOMAL LOCATION

Genetic locus: ITGB2 (human) mapping to 21q22.3; Itgb2 (mouse) mapping to 10 C1.

## SOURCE

Integrin  $\beta 2$  (CTB104) is a mouse monoclonal antibody raised against amino acids 1-769 representing full length Integrin  $\beta 2$  of human origin.

## PRODUCT

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

Integrin  $\beta 2$  (CTB104) is available conjugated to agarose (sc-8420 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8420 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8420 PE), fluorescein (sc-8420 FITC), Alexa Fluor<sup>®</sup> 488 (sc-8420 AF488), Alexa Fluor<sup>®</sup> 546 (sc-8420 AF546), Alexa Fluor<sup>®</sup> 594 (sc-8420 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-8420 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-8420 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-8420 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Integrin  $\beta 2$  (CTB104) is available conjugated to Alexa Fluor<sup>®</sup> 405 (sc-8420 AF405, 200  $\mu$ g/ml), for IF, IHC(P) and FCM.

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

## STORAGE

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

## APPLICATIONS

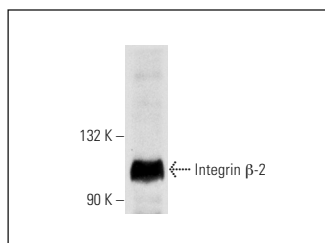
Integrin  $\beta 2$  (CTB104) is recommended for detection of Integrin  $\beta 2$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (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), flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Integrin  $\beta 2$  siRNA (h): sc-29374, Integrin  $\beta 2$  siRNA (m): sc-35676, Integrin  $\beta 2$  shRNA Plasmid (h): sc-29374-SH, Integrin  $\beta 2$  shRNA Plasmid (m): sc-35676-SH, Integrin  $\beta 2$  shRNA (h) Lentiviral Particles: sc-29374-V and Integrin  $\beta 2$  shRNA (m) Lentiviral Particles: sc-35676-V.

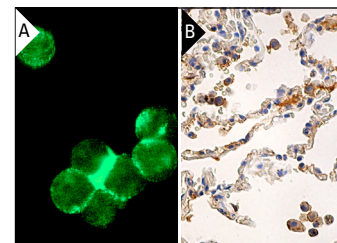
Molecular Weight of Integrin  $\beta 2$ : 95 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, CTLL-2 cell lysate: sc-2242 or TK-1 whole cell lysate: sc-364798.

## DATA



Integrin  $\beta 2$  (CTB104): sc-8420. Western blot analysis of Integrin  $\beta 2$  expression in HL-60 whole cell lysate.



Integrin  $\beta 2$  (CTB104): sc-8420. Immunofluorescence staining of methanol-fixed HL-60 cells showing membrane staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing membrane and cytoplasmic staining of macrophages (B).

## SELECT PRODUCT CITATIONS

1. Edwards, J.L. and Apicella, M.A. 2002. The role of lipooligosaccharide in *Neisseria gonorrhoeae* pathogenesis of cervical epithelia: lipid A serves as a C3 acceptor molecule. *Cell. Microbiol.* 4: 585-598.
2. Jo, D.H., et al. 2016. Quantitative proteomics reveals  $\beta 2$  Integrin-mediated cytoskeletal rearrangement in vascular endothelial growth factor (VEGF)-induced retinal vascular hyperpermeability. *Mol. Cell. Proteomics* 15: 1681-1691.
3. Tseng, H.Y., et al. 2018. LCP1 preferentially binds clasped  $\alpha M\beta 2$  Integrin and attenuates leukocyte adhesion under flow. *J. Cell Sci.* 131: jcs218214.
4. Liu, W., et al. 2019. RhoGDI2 positively regulates the Rho GTPases activation in response to the  $\beta 2$  outside-in signaling in T cells adhesion and migration on ICAM-1. *J. Leukoc. Biol.* 106: 431-446.

## RESEARCH USE

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