

# Integrin $\beta 2$ (M18/2.a.12.7): sc-81727

## 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

- Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. *Cell* 69: 11-25.
- Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. *Science* 267: 883-885.
- Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
- Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
- Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. *Bioessays* 18: 911-917.
- Naessens, J., et al. 1997. Nomenclature and characterization of leukocyte differentiation antigens in ruminants. *Immunol. Today* 18: 365-638.
- Drbal, K., et al. 2000. Human leukocytes contain a large pool of free forms of CD18. *Biochem. Biophys. Res. Commun.* 275: 295-299.
- Drbal, K., et al. 2001. A proteolytically truncated form of free CD18, the common chain of leukocyte integrins, as a novel marker of activated myeloid cells. *Blood* 98: 1561-1566.
- Dusinsky, R., et al. 2001. Monoclonal antibodies specific for bovine CD18. *Folia Biol.* 47: 108-110.

## CHROMOSOMAL LOCATION

Genetic locus: Itgb2 (mouse) mapping to 10 C1.

## SOURCE

Integrin  $\beta 2$  (M18/2.a.12.7) is a rat monoclonal antibody raised by immunizing rats with cytotoxic T cell glycoproteins of mouse origin.

## STORAGE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for blocking or stimulation of some cell-adhesion functions, sc-81727 L, 200  $\mu$ g/0.1 ml.

Integrin  $\beta 2$  (M18/2.a.12.7) is available conjugated to fluorescein (sc-81727 FITC), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

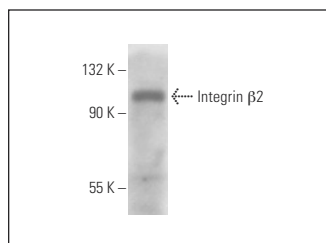
Integrin  $\beta 2$  (M18/2.a.12.7) is recommended for detection of Integrin  $\beta 2$  of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting 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 x 10<sup>6</sup> cells).

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

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

Positive Controls: CTLL-2 cell lysate: sc-2242, mouse PBL whole cell lysate or TK-1 whole cell lysate: sc-364798.

## DATA



Integrin  $\beta 2$  (M18/2.a.12.7): sc-81727. Western blot analysis of Integrin  $\beta 2$  expression in mouse PBL whole cell lysate.

## SELECT PRODUCT CITATIONS

- Choi, J.S., et al. 2015. The matricellular protein CCN1 promotes mucosal healing in murine colitis through IL-6. *Mucosal Immunol.* 8: 1285-1296.

## RESEARCH USE

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

## CONJUGATES

See **Integrin  $\beta 2$  (CTB104): sc-8420** for Integrin  $\beta 2$  antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.