

Integrin $\beta 2$ (M18/2): sc-18862

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.

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.

CHROMOSOMAL LOCATION

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

SOURCE

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

PRODUCT

Each vial contains 200 μ g IgG_{2a} 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-18862 L, 200 μ g/0.1 ml.

Integrin $\beta 2$ (M18/2) is available conjugated to either fluorescein (sc-18862 FITC) or Alexa Fluor[®] 488 (sc-18862 AF488), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

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

APPLICATIONS

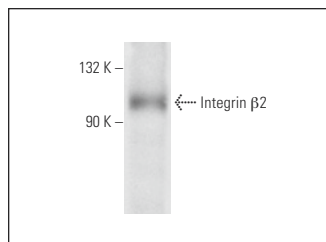
Integrin $\beta 2$ (M18/2) is recommended for detection of Integrin $\beta 2$ of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ 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.

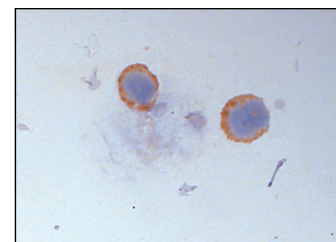
Molecular Weight of Integrin $\beta 2$: 95 kDa.

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

DATA



Integrin $\beta 2$ (M18/2): sc-18862. Western blot analysis of Integrin $\beta 2$ expression in mouse PBL whole cell lysate.



Integrin $\beta 2$ (M18/2): sc-18862. Immunoperoxidase staining of formalin-fixed mouse peripheral blood lymphocytes showing membrane staining of lymphocytes.

SELECT PRODUCT CITATIONS

- Kiris, I., et al. 2009. Iloprost downregulates expression of adhesion molecules and reduces renal injury induced by abdominal aortic ischemia-reperfusion. *Ann. Vasc. Surg.* 23: 212-223.
- Genovese, T., et al. 2023. Inhibition of fatty acid amide hydrolase (FAAH) regulates NF- κ B pathways reducing bleomycin-induced chronic lung inflammation and pulmonary fibrosis. *Int. J. Mol. Sci.* 24: 10125.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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