

# Integrin $\alpha$ IIb/ $\beta$ 3 (474): sc-52816

## 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.
- Hantgan, R.R., et al. 2003. Ligand binding promotes the entropy-driven oligomerization of Integrin  $\alpha$ IIb/ $\beta$ 3. *J. Biol. Chem.* 278: 3417-3426.
- Goncalves, I., et al. 2003. Integrin  $\alpha$ IIb/ $\beta$ 3-dependent calcium signals regulate platelet-Fibrinogen interactions under flow. Involvement of phospholipase C  $\gamma$ 2. *J. Biol. Chem.* 278: 34812-34822.
- Maxwell, M.J., et al. 2004. SHIP-1 and Lyn kinase negatively regulate Integrin  $\alpha$ IIb/ $\beta$ 3 signaling in platelets. *J. Biol. Chem.* 279: 32196-32204.

## CHROMOSOMAL LOCATION

Genetic locus: ITGA2B (human) mapping to 17q21.31, ITGB3 (human) mapping to 17q21.32.

## SOURCE

Integrin  $\alpha$ IIb/ $\beta$ 3 (474) is a mouse monoclonal antibody raised against human platelets.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

Integrin  $\alpha$ IIb/ $\beta$ 3 (474) is recommended for detection of Integrin  $\alpha$ IIb/ $\beta$ 3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

Molecular Weight of Integrin  $\alpha$ IIb: 136 kDa.

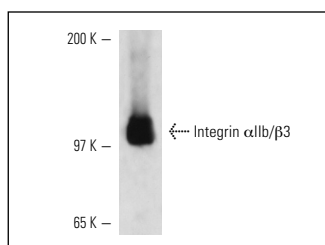
Molecular Weight of Integrin  $\beta$ 3: 125 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, human PBL whole cell lysate or human platelet extract: sc-363773.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA




Integrin  $\alpha$ IIb/ $\beta$ 3 (474): sc-52816. Western blot analysis of Integrin  $\alpha$ IIb/ $\beta$ 3 expression in human PBL whole cell lysate.

## STORAGE

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

## PROTOCOLS

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



See **Integrin  $\alpha$ IIb (B-9): sc-365938** for Integrin  $\alpha$ IIb antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.