

# p-Integrin $\beta$ 3 (Tyr 747): sc-20234

## 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, but can also bind to soluble ligands or to counterreceptors on adjacent cells, thereby leading to aggregation of cells. Ligands serve to cross-link or cluster integrins by binding to adjacent integrin receptors. 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. GRB2 binds Integrin  $\beta$ 3 only when both Tyr 747 and Tyr 759 are phosphorylated. However, SHC binds the monophosphorylated Integrin  $\beta$ 3 at Tyr 759, suggesting that tyrosine phosphorylation of Integrin  $\beta$ 3 may be important in initiating outside-in signaling cascades by inducing association of signaling components directly with Integrin.

## REFERENCES

1. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. *Cell* 69: 11-25.
2. Miyamoto, S., Akiyama, S.K. and Yamada, K.M. 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.
4. Sheppard, D. 1996. Epithelial integrins. *BioEssays* 18: 655-660.
5. Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. *BioEssays* 18: 911-917.

## CHROMOSOMAL LOCATION

Genetic locus: ITGB3 (human) mapping to 17q21.32; Itgb3 (mouse) mapping to 11 E1.

## SOURCE

p-Integrin  $\beta$ 3 (Tyr 747) is available as either goat (sc-20234) or rabbit (sc-20234-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing phosphorylated Tyr 747 of Integrin  $\beta$ 3 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-20234 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

p-Integrin  $\beta$ 3 (Tyr 747) is recommended for detection of Tyr 747 phosphorylated Integrin  $\beta$ 3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

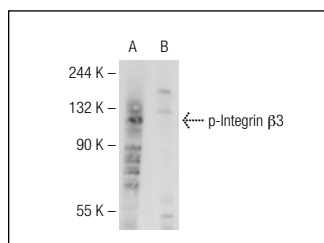
p-Integrin  $\beta$ 3 (Tyr 747) is also recommended for detection of correspondingly phosphorylated Tyr on Integrin  $\beta$ 3 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for Integrin  $\beta$ 3 siRNA (h): sc-29375, Integrin  $\beta$ 3 siRNA (m): sc-35677, Integrin  $\beta$ 3 shRNA Plasmid (h): sc-29375-SH, Integrin  $\beta$ 3 shRNA Plasmid (m): sc-35677-SH, Integrin  $\beta$ 3 shRNA (h) Lentiviral Particles: sc-29375-V and Integrin  $\beta$ 3 shRNA (m) Lentiviral Particles: sc-35677-V.

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

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, HL-60 whole cell lysate: sc-2209 or A-431 whole cell lysate: sc-2201.

## DATA



p-Integrin  $\beta$ 3 (Tyr 747)-R: sc-20234-R. Western blot analysis of Integrin  $\beta$ 3 phosphorylation in untreated (A) and lambda protein phosphatase (sc-200312A) treated (B) HEL 92.1.7 whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

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