

p-Integrin β 3 (Tyr 759)-R: sc-20235-R

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, 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 β 3 only when both Tyr 747 and Tyr 759 are phosphorylated. However, SHC binds the monophosphorylated Integrin β 3 at Tyr 759, suggesting that tyrosine phosphorylation of Integrin β 3 may be important in initiating outside-in signaling cascades by inducing association of signaling components directly with Integrin.

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.
- Law, D.A., et al. 1996. Outside-in integrin signal transduction. α IIb β 3- (GP IIb IIIa) tyrosine phosphorylation induced by platelet aggregation. *J. Biol. Chem.* 271: 10811-10815.

CHROMOSOMAL LOCATION

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

SOURCE

p-Integrin β 3 (Tyr 759)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 759 phosphorylated Integrin β 3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-20235 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

p-Integrin β 3 (Tyr 759)-R is recommended for detection of Tyr 759 phosphorylated Integrin β 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 β 3 (Tyr 759)-R is also recommended for detection of correspondingly phosphorylated Integrin β 3 in additional species, including equine, canine, bovine, porcine and avian.

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

Molecular Weight of p-Integrin β 3: 125 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Shen, Z., et al. 2013. Novel focal adhesion protein kindlin-2 promotes the invasion of gastric cancer cells through phosphorylation of integrin β 1 and β 3. *J. Surg. Oncol.* 108: 106-112.

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 or our catalog for detailed protocols and support products.


 MONOS
 Satisfaction
 Guaranteed

Try **p-Integrin β 3 (pY759.7A): sc-136458**, our highly recommended monoclonal alternative to p-Integrin β 3 (Tyr 759).