

p-Integrin β 3 (Tyr 747): sc-101707

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

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- Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
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- 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., Nannizzi-Alaimo, L. and Phillips, D.R. 1996. Outside-in Integrin signal transduction. α IIb β 3-(GP IIb IIIa) tyrosine phosphorylated 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 747) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 747 of Integrin β 3 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 β 3 (Tyr 747) is recommended for detection of Tyr 747 phosphorylated Integrin β 3 of mouse and human 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 and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Integrin β 3 siRNA (h): sc-29375 and Integrin β 3 siRNA (m): sc-35677.

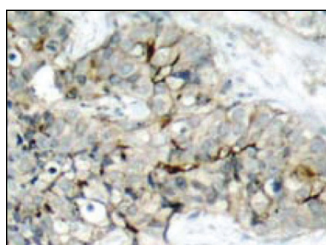
Molecular Weight of p-Integrin β 3: 125 kDa.

Positive Controls: human breast carcinoma tissue or H₂O₂-treated HL-60 whole cell lysate.

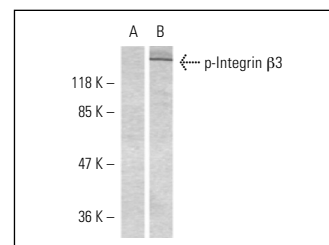
RECOMMENDED SECONDARY REAGENTS

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) and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-Integrin β 3 (Tyr 747): sc-101707. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing membrane localization.



p-Integrin β 3 (Tyr 747): sc-101707. Western blot analysis of phosphorylated Integrin β 3 expression in untreated (A) and H₂O₂-treated (B) HL-60 whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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