

p-Integrin $\alpha 4$ (α PS $\alpha 4$): sc-23943

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

1. Takada, Y., et al. 1989. The primary structure of the $\alpha 4$ subunit of VLA-4: homology to other integrins and a possible cell-cell adhesion function. *EMBO J.* 8: 1361-1368.
2. Rosen, G.D., et al. 1991. Characterization of the $\alpha 4$ integrin gene promoter. *Proc. Natl. Acad. Sci. USA* 88: 4094-4098.
3. Teixido, J., et al. 1992. Functional and structural analysis of VLA-4 integrin $\alpha 4$ subunit cleavage. *J. Biol. Chem.* 267: 1786-1791.
4. Hynes, R.O. 1992. Integrins: versatility, modulation, and signaling in cell adhesion. *Cell* 69: 11-25.
5. Clark, E.A., et al. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
6. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. *Science* 267: 883-885.
7. Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
8. 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: ITGA4 (human) mapping to 2q31.3; Itga4 (mouse) mapping to 2 C3.

SOURCE

p-Integrin $\alpha 4$ (α PS $\alpha 4$) is a mouse monoclonal antibody raised against a peptide corresponding to an internal region including Ser 988 phosphorylated Integrin $\alpha 4$ of human origin.

PRODUCT

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

APPLICATIONS

p-Integrin $\alpha 4$ (α PS $\alpha 4$) is recommended for detection of Ser 988 phosphorylated Integrin $\alpha 4$ of mouse, rat 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with unphosphorylated Integrin $\alpha 4$.

Suitable for use as control antibody for Integrin $\alpha 4$ siRNA (h): sc-35685, Integrin $\alpha 4$ siRNA (m): sc-35686, Integrin $\alpha 4$ shRNA Plasmid (h): sc-35685-SH, Integrin $\alpha 4$ shRNA Plasmid (m): sc-35686-SH, Integrin $\alpha 4$ shRNA (h) Lentiviral Particles: sc-35685-V and Integrin $\alpha 4$ shRNA (m) Lentiviral Particles: sc-35686-V.

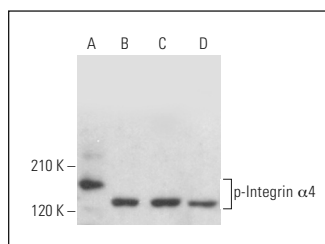
Molecular Weight of p-Integrin $\alpha 4$: 150/90 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Neuro-2A whole cell lysate: sc-364185 or WEHI-231 whole cell lysate: sc-2213.

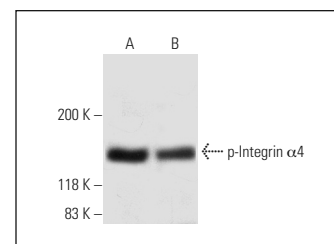
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



p-Integrin $\alpha 4$ (α PS $\alpha 4$): sc-23943. Western blot analysis of Integrin $\alpha 4$ phosphorylation in Jurkat (A), Neuro-2A (B), WEHI-231 (C) and PC-12 (D) whole cell lysates.



p-Integrin $\alpha 4$ (Ser 988): sc-23943. Western blot analysis of Integrin $\alpha 4$ phosphorylation in Jurkat (A) and alkaline phosphatase treated Jurkat (B) whole cell lysates.

STORAGE

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

RESEARCH USE

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