Integrin β4 (Tyr-1494), phospho-specific

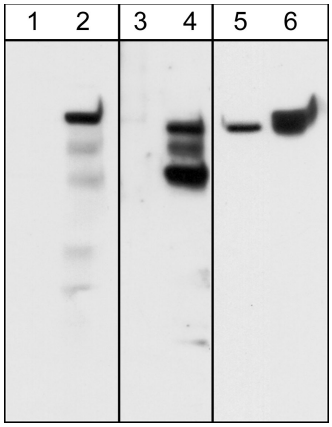
Cat. # IP1281
Host Rabbit Polyclonal
Size 100 µl

Background:

Integrins are cell adhesion molecules that can mediate bidirectional transfer of signals across the plasma membrane. The cytoplasmic domains of integrin family members interact with components of the signal transduction apparatus within cells. Integrin α6β4receptors are found in basement membrane along with laminin-5. These receptors are expressed in epithelial, schwann, endothelial and some immune cells. The cytoplasmic domain of the integrin-β4 subunit recruits the adaptor protein Shc and is required for assembly of hemidesmosomes. Tyrosine phosphorylation of multiple sites within the cytoplasmic domain regulates these cellular events. In particular, tyrosine 1526 interacts with the phosphotyrosine binding domain of Shc and is required for Shc activation. In addition, tyrosine 1494 is required for integrin-mediated IRS-2 phosphorylation and activation of PI3-kinase. More importantly this site is critical for integrin α6β4 increases in carcinoma invasion.

References

Shaw, L.M. (2001). Mol Cell Biol. 21(15):5082-5093.
Dans, M. et al. (2001). J Biol Chem. 276(2):1494-1502.
Kim, H.I. et al. (2008) Cancer Prev Res. 1(5):385. (WB: Human β4 transfectants)



Western blot analysis of A431 cells serum starved overnight (lanes 1, 3, & 5) and treated with pervanadate (1 mM) for 30 min (lanes 2, 4, & 6). The blots were probed with rabbit polyclonal anti-integrin-β4 (Tyr-1526) (lanes 1 & 2) and anti-integrin-β4 (Tyr-1494) (lanes 3 & 4) or with mouse monoclonal anti-integrin-β4 (lanes 5 & 6).

Immunogen:

Phospho-integrin-β4 (Tyr-1494) synthetic peptide (coupled to KLH) corresponding to amino acid residues around tyrosine 1494 of human integrin-β4. This peptide sequence is found in all three integrin-β4 isoforms and is highly conserved in rat and mouse integrin-β4.

Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Do not aliquot. Stable for 1 year.

Applications:

WB	1:2000
ELISA	1:4000

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Related Products:

IP1291 Integrin β4 (Tyr-1526), phospho-specific Rabbit Polyclonal
IM1261 Integrin β4 (Cytoplasmic Region) Mouse Monoclonal
IX1285 phospho-Integrin β4 (Tyr-1494) Peptide
IX1295 phospho-Integrin β4 (Tyr-1526) Peptide

Specificity:

This antibody was cross-adsorbed to phospho-tyrosine coupled to agarose then affinity purified using phospho-integrin-β4 (Tyr-1494) peptide (without carrier). The antibody detects a 200kDa* protein corresponding to the molecular mass of integrin-β4 on SDS-PAGE immunoblots of A431 cells treated with pervanadate, but not in control cells. Similar results were also observed in src-transformed Hct116 cells treated with pervanadate.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

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