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ProductInformation

Anti-phospho-Integrin β1 Receptor (pThr^{788}/pThr^{789})
produced in rabbit, affinity isolated antibody

Catalog Number **I7783**

Product Description

Anti-phospho-Integrin β1 Receptor (pThr^{788}/pThr^{789}) is produced in rabbit using as immunogen a synthetic phosphopeptide derived from the region of human integrin β1 receptor that contains threonines 788 and 789. The sequence is conserved (100% homology) in human, mouse, rat, and chicken. The antiserum is affinity purified using epitope-specific affinity chromatography. The antibody is preadsorbed to remove any reactivity toward a non-phosphorylated integrin β1.

The antibody detects human integrin β1 receptor by immunoblotting (~130 kDa). Mouse, rat, and chicken have not been tested, but are expected to react.

Integrin β1, also known as CD29, is a 130 kDa transmembrane glycoprotein that forms noncovalent complexes with various Integrin α-subunits (including α1, α2, α3, α4, α5, and α6, also known as CD49a, CD49b, CD49c, CD49d, CD49e, and CD49f, respectively) to form the functional receptors that bind to specific extracellular matrix proteins. Integrin receptors are involved in the regulation of a variety of important biological functions, including embryonic development, wound repair, hemostasis, and prevention of programmed cell death. They are also implicated in abnormal pathological states such as tumor directed angiogenesis, tumor cell growth, and metastasis. These heterodimeric receptors bridge the cytoplasmic actin cytoskeleton with proteins present in the extracellular matrix and/or on adjacent cells. The clustering of integrins on a cell's surface leads to the formation of focal contacts. Interactions between integrins and the extracellular matrix lead to activation of signal transduction pathways and regulation of gene expression.

Phosphorylation of threonines 788 and 789 on integrin β1 receptor may play a key role in cell-cycle dependent regulation.

Reagent

Supplied as a solution in Dulbecco's phosphate buffered saline (without Mg^{2+} and Ca^{2+}) containing 50% glycerol with 1 mg/mL BSA (protease and IgG-free) and 0.05% sodium azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C. Upon initial thawing, freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing to prevent denaturing the antibody. Do not store in frost-free freezers. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a recommended working dilution of 1:1,000 is recommended using HeLa cells in mitosis.

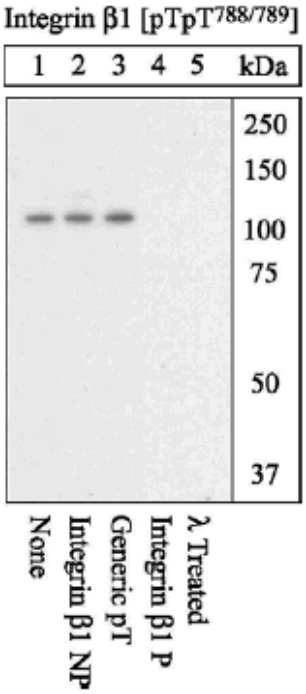
The supplied reagent is sufficient for 10 blots.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working concentration by titration.

Peptide Competition

1 HeLa extracts of mitotic cells generated by treatment with taxol were resolved by SDS-PAGE on a 10% Tris-glycine gel.
2 The proteins were transferred to PVDF and preincubated as follows:
   - Lane 1,5 no peptide
   - Lane 2 The non-phosphorylated peptide corresponding to the phosphopeptide
   - Lane 3 generic phosphothreonine-containing peptide
   - Lane 4 The phosphopeptide immunogen.
   - Lane 5 lambda phosphatase treated
3 All lanes were incubated with Integrin β1 receptor (pThr^{788}/Thr^{789})
4 After washing, membranes were incubated with goat F(ab')$_2$ anti-rabbit IgG HRP and bands were detected.

Only the phosphopeptide corresponding to Integrin β1 receptor (pThr^{788}/Thr^{789}) blocks the antibody signal, demonstrating the specificity of the antibody for this phosphorylated residue. Also, phosphatase stripping eliminates the signal, further verifying that the antibody is phospho-specific



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