

## Product Information

### Anti-phospho-Integrin $\beta 3$ (pTyr<sup>785</sup>)

produced in rabbit, affinity isolated antibody

Catalog Number **I7658**

#### Product Description

Anti-phospho-Integrin  $\beta 3$  (pTyr<sup>785</sup>) is produced in rabbit using as immunogen a synthetic phosphorylated peptide derived from C-terminus of the human integrin  $\beta 3$  receptor (Gene ID #3690) (based on Swiss Protein database, accession number P05106). The sequence is conserved in human, mouse, and rat. The antiserum is affinity purified using epitope-specific affinity chromatography. The antibody is preadsorbed to remove any reactivity toward a non-phosphorylated peptide.

The antibody detects human Integrin  $\beta 3$ . Other species have not been tested, which includes mouse and rat (100% homology), chicken (94%), and frog (88%) The antibody has been used in immunoblotting applications.

Integrin  $\beta 3$ , also known as CD61, is a 130 kDa transmembrane glycoprotein that binds noncovalently in complexes with integrin subunits  $\alpha_{IIb}$ ,  $\alpha_V$  to form the functional receptor that binds to specific extracellular matrix proteins, e.g., fibronectin, vitronectin, etc. 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 integrin receptors on the cell surface and their binding to the extracellular matrix leads to the formation of focal contacts and the activation of various signal transduction pathways.

Phosphorylation of Tyr<sup>785</sup> on Integrin  $\beta 3$  is essential for Shc and Grb2 binding, and promotes cell migration. Tyr<sup>785</sup> is commonly referred to as Tyr<sup>759</sup>, the corresponding site in the chicken Integrin  $\beta 3$  protein.

#### Reagent

Supplied in phosphate buffer, pH 7.4 containing 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  $-20\text{ }^{\circ}\text{C}$ . 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. The antibody is stable for at least 12 months when stored appropriately.

#### Product Profile

The supplied reagent is sufficient for 10 blots.

Immunoblotting: a recommended working concentration of 0.1-1.0  $\mu\text{g}/\text{mL}$  is determined by using K562 cells transfected with human Integrin  $\alpha_V$  and wild-type (WT) or mutant (Tyr<sup>785F</sup>) human Integrin  $\beta 3$ , and analyzed by immunoprecipitation with 1A2 (human Integrin  $\beta 3$ ) mAb.

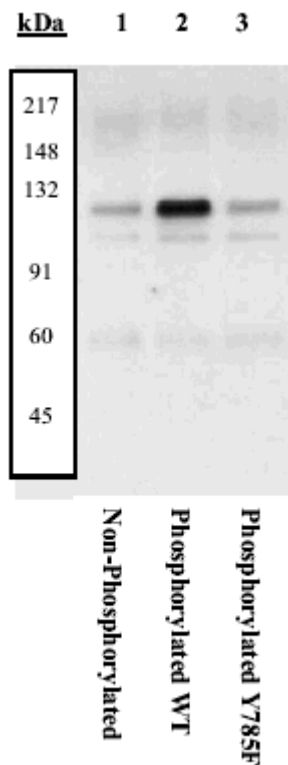
**Note:** In order to obtain the best results in various techniques and preparations, we recommend determining optimal working concentration by titration.

#### Western Blot

1. K562 cells transfected with human Integrin  $\alpha_V$  and wild-type (WT) or mutant (Tyr<sup>785F</sup>) human Integrin  $\beta 3$  were analyzed by immunoprecipitating the Integrin  $\beta 3$  protein with 1A2 (human Integrin  $\beta 3$ ) mAb, and resolved by SDS-PAGE on a 10% Tris-glycine gel.
2. The proteins then were transferred to PVDF and, after blocking with a 5% BSA-TBST buffer overnight at  $4\text{ }^{\circ}\text{C}$ , incubated with 0.50  $\mu\text{g}/\text{mL}$  Integrin  $\beta 3$  (pTyr<sup>785</sup>) antibody with samples corresponding to:

Lane 1	non-phosphorylated Integrin $\beta 3$
Lane 2	phosphorylated WT Integrin $\beta 3$
Lane 3	phosphorylated Tyr <sup>785F</sup> mutant Integrin $\beta 3$

- After washing, membranes were incubated with goat F(ab')<sub>2</sub> anti-rabbit IgG alkaline phosphatase and bands were detected.



- The data show detection of Integrin  $\beta 3$  receptor phosphorylation with the wild-type but not the mutant recombinant protein, thereby demonstrating the specificity of the Integrin  $\beta 3$  (pTyr<sup>785</sup>) antibody.

## References

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