

Phospho-(Tyr) p85 PI3K Binding Motif Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

Sensitivity: Endogenous	Source/Isotype: Rabbit
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.
Specificity/Sensitivity	Phospho-(Tyr) p85 PI3K Binding Motif Antibody preferentially recognizes peptides and proteins containing phospho-tyrosine at the consensus YXXM motif. Some cross-reactivity is observed with peptides that contain phospho-tyrosine followed by methionine. The antibody does not cross-react with the corresponding nonphosphorylated sequences or with other phospho-tyrosine-containing motifs. By ELISA, the antibody recognizes a wide range of tyrosine-phosphorylated peptides with the YXXM sequence. It also recognizes proteins with phosphorylated p85 binding motifs by Western blot analysis. (U.S. Patent No's.: 6,441,140; 6,982,318; 7,259,022; 7,344,714; U.S.S.N. 11,484,485; and all foreign equivalents.)
Source / Purification	Polyclonal antibodies are produced by immunizing animals with synthetic phospho-(Tyr) p85 binding motif peptides. Antibodies are sequentially purified by protein A and peptide affinity chromatography.
Background	Phosphoinositide 3 kinase (PI3K) is a lipid kinase that catalyzes the phosphorylation of PI(4,5)P ₂ at the D3 position of the inositol ring. The resulting product, PI(3,4,5)P ₃ , can be recognized by PH domain-containing signaling molecules, including various kinases and their regulators, and activates the corresponding cell signaling pathways, eventually leading to cell growth, survival and cellular movement (1). PI3K is a heterodimer with a p85 regulatory subunit and p110 catalytic subunit. The p85 subunit has two SH2 domains that bind to phospho-tyrosine with the consensus motif (Y*XXM), where X denotes any amino acid and Y* is phosphorylated tyrosine. This motif exists in many of the receptor tyrosine kinases and their substrates, including EGFR, FGFR, IRS-1, BCAP and GAB1 (2,3). The docking of PI3K in the vicinity of the plasma membrane through p85 recognition of the receptor phosphorylated YXXM activates the PI3K pathway. Phospho-(Tyr) p85 PI3K Binding Motif Antibody specifically recognizes PI3K binding targets at their phosphorylated YXXM motif, providing a powerful new tool for PI3K binding protein discovery and characterization as well as HTS drug screening for potential regulators.
Background References	<ol style="list-style-type: none"> 1. Cantley, L.C. (2002) <i>Science</i> 296, 1655-7. 2. Songyang, Z. et al. (1994) <i>Mol Cell Biol</i> 14, 2777-85. 3. Songyang, Z. et al. (1993) <i>Cell</i> 72, 767-78.
Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
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