

Anti-Phospho-Thr²¹⁰ Polo-like Kinase 1 Antibody



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Catalog #: p202-210

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Host	Applications	Species Tested	Species Reactivity*	Molecular Reference
Rabbit	WB 1:1000	R, H	B, C, M, NHP, X, Z	~66 kDa

Product Description: Affinity purified rabbit polyclonal antibody.

Biological Significance: Polo-like kinases are important regulators of cell cycle progression. PLK1 is a highly conserved Ser/Thr kinase that has essential roles in the formation of mitotic bipolar spindles (van Vugt et al., 2004). Deregulated expression of PLK's is detected in many types of cancer and associated with oncogenesis (Takei et al., 2005). It has been proposed that PLK1 function is altered at different stages of mitosis through consecutive phosphorylation events at Ser137 and Thr210 (van de Weerd et al., 2005).

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Thr²¹⁰ of human PLK1.

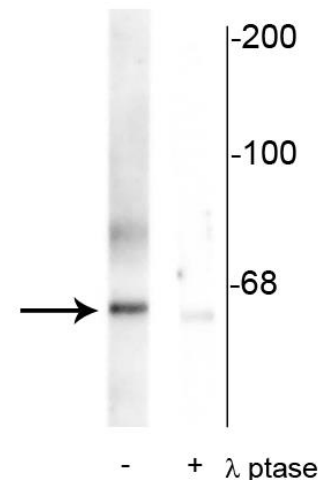
Antibody Specificity: Specific for endogenous levels of the ~66 kDa PLK phosphorylated at Thr²¹⁰. The immunolabeling is completely eliminated by treatment with λ-phosphatase.

Purification Method: Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.

Quality Control Tests: Western blots performed on each lot.

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of rat synaptic membrane showing specific immunolabeling of the ~66 kDa PLK protein phosphorylated at Thr²¹⁰ in the first lane (-). Phosphospecificity is shown in the second lane (+) where the immunolabeling is completely eliminated by blot treatment with *lambda* phosphatase (*lambda*-Ptase, 1200 units for 30 minutes).

Product Specific References:

van de Weerd BC, van Vugt MA, Lindon C, Kauw JJ, Rozendaal MJ, Klompmaker R, Wolthuis RM, Medema RH (2005) Uncoupling anaphase-promoting complex/cyclosome activity from spindle assembly checkpoint control by deregulating polo-like kinase 1. *Mol. Cell Biol.* Mar; 25(5):2031-44.

General References:

van Vugt MA, van de Weerd BC, Vader G, Janssen H, Calafat J, Klompmaker R, Wolthuis RM, Medema RH (2004) Polo-like kinase 1 is required for bipolar spindle formation but is dispensable for anaphase promoting complex cdc20 activation and initiation of cytokinesis. *J. Biol. Chem.* Aug 27;279(35):36841-54.

Takai N, Hamanaka R, Yoshimatsu J, Miyakawa I (2005) Polo-like kinases and cancer. *Oncogene* Jan 10; 24(2): 287-91.