

Anti-phospho-PLK1 (Thr210)

Rabbit Polyclonal Antibody

Catalog # P41-65R

Lot # J1274-30

Cited Applications

WB

Suggested Dilutions:

WB 1:1,000

Ideal working dilutions for each application should be empirically determined by the investigator.

Specificity

Recognizes the PLK1 protein phosphorylated at threonine 201

Cross Reactivity

Human, Mouse, Rat, Bovine, Canine, Chicken, non-Human Primates, Xenopus and Zebrafish

Host/Isotype/Clone#

Rabbit, IgG

Immunogen

Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr210 conjugated to KLH

Formulation

100 μ l in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 μ g per ml BSA and 50% glycerol.

Scientific Background

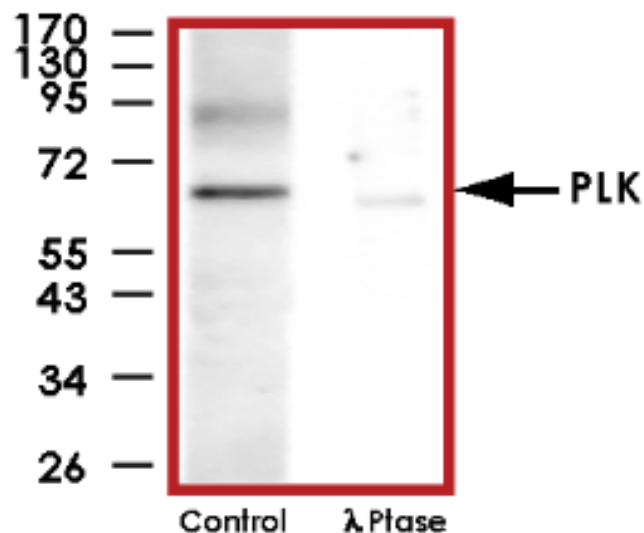
PLK1 is a member of the Polo-Like Kinase family of Ser/Thr kinases. PLK1 localizes to centrosomes or spindle pole bodies and undergoes subcellular relocation during the cell cycle. Deregulated activities of PLKs often result in defective centrosome duplication, maturation, and/or microtubule dynamics (1). PLKs also regulate the function of the Golgi complex. Deregulated expression of human PLK1 is strongly correlated with the development of many types of malignancies. Furthermore, ectopic expression of PLK1 dominant negative protein leads to rapid cell death (2). It has been proposed that PLK1 function is altered at different stages of mitosis through consecutive phosphorylation events at Ser137 and Thr210 (3).

References

1. Nigg, EA. et al: Dynamic changes in nuclear architecture during mitosis: on the role of protein phosphorylation in spindle assembly and chromosome segregation. *Exp Cell Res.* 1996 Dec 15;229.
2. Dai, W. et al: Polo-like kinases and the microtubule organization center: targets for cancer therapies. *Prog Cell Cycle Res.* 2003;5:327-34.
3. van de Weerd B.C. , van Vugt MA, Lindon C, Kauw JJ, Rozendaal MJ, Klomp maker 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, 2005.

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Sample Data



Western blot of rat synaptic membrane showing specific immunolabeling of the ~66 kDa PLK1 protein phosphorylated at Thr210 (control). The phosphospecificity of this labeling is shown in the second lane (lambda-phosphatase: lambda-Ptase). The blot is identical to the control except that it was incubated in lambda-Ptase (1200 units for 30 min) before being exposed to the Anti-phospho-PLK1(Thr210) antibody. The immunolabeling is completely eliminated by treatment with lambda-Ptase.

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Purification Affinity chromatography

Stability 1yr at -20°C from date of shipment

Storage & Shipping

Store product at -20°C. For optimal storage, aliquot antibody into smaller quantities after centrifugation and store at recommended temperature. For optimal performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on ice packs.