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Phospho-Ser482,486,490 Polo-Like Kinase Kinase Antibody

Affinity purified rabbit polyclonal antibody
Catalog # AN1065

Product Information

Application	WB
Primary Accession	P70032
Reactivity	Xenopus
Predicted	Human, Mouse, Rat, Zebrafish
Host	Rabbit
Clonality	polyclonal
Calculated MW	68212

Additional Information

Gene ID	380481
Gene Name	PLK1
Other Names	Serine/threonine-protein kinase PLK1, Plx1, Polo-like kinase 1, PLK-1, plk1, plx1
Target/Specificity	Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser482/486/490 conjugated to KLH.
Dilution	WB~~1:1000
Format	Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.
Antibody Specificity	Specific for the ~120k PLKK protein phosphorylated at Ser482,486,490.
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-Ser482,486,490 Polo-Like Kinase Kinase Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

Considerable evidence indicates that a polo-like kinase (PLK) plays an important role in cell cycle regulation. PLK is also required for bipolar spindle formation, activation of the anaphase-promoting complex/cyclosome, and cytokinesis. Recent work led to the identification of a PLKK that is thought to be responsible for activation of PLK. Recent work (Erikson, et al., 2004) has shown that PLKK is in turn activated by phosphorylation at three sites (Ser482, Ser486 and Ser490). Thus activation of PLK is thought to involve a

kinase cascade involving the phosphorylation of Ser482,486,490 in PLKK.

References

Erikson E, Haystead TAJ, Qian, Y-W, Maller JL (2004) A feedback loop in the polo-like kinase activation pathway. J Biol Chem 279:32219-32224.
Kumagai A, Dunphy WG (1996) Purification and molecular cloning of Plx1, a cdc25-regulatory kinase from Xenopus egg extracts. Science 273:1377-1380.
Liu J, Lewellyn AL, Chen LG, Maller JL (2004) The polo box is required for multiple functions of Plx1 in mitosis. J Biol Chem 279:21367-21373.
van Vugt, MATM, van de Weerdt, BCM, Vader G, Janssen H, Calafat J, Klompmaker R, Wolthuis RMF, 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 279:36841-36854.
Eleanor Erikson, Timothy A. J. Haystead, Yue-Wei Qian, and James L. Maller (2004) A Feedback Loop in the Polo-like Kinase Activation Pathway. J. Biol. Chem., Jul 2004; 279: 32219 - 32224