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ProductInformation

Anti-phospho-Polo-Like Kinase Kinase [pSer^{482}, pSer^{486}, pSer^{490}]
produced in rabbit, affinity isolated antibody

Catalog Number **P2124**

Product Description

Anti-phospho- Polo-Like Kinase Kinase (PLKK) [pSer^{482}, pSer^{486}, pSer^{490}] is developed in rabbit using a synthetic phosphopeptide corresponding to amino acid residues surrounding the *Xenopus* Polo-Like Kinase Kinase phosphorylated on serines 482, 486 and 49 as immunogen. The antibody is affinity purified using sequential chromatography on phospho- and non-phosphopeptide affinity columns.

Polo-Like Kinase Kinase, phosphorylated at pSer^{482}, pSer^{486}, pSer^{490}, is an ~120 kDa protein. The antigen sequence used is closely homologous to rodent and human forms of PLKK. *Xenopus* is the only species tested to date. It is used in immunoblotting applications.

Polo-like kinases (PLKs) are a family of serine/threonine kinases that regulate cellular events in mitosis and cytokinesis. The PLK family is structurally and functionally related to the polo gene in *Drosophila.* Four Plks were found to be expressed in mammals: Plk1, Plk2 or Snk, Plk3 or Prk/Fnk and Sak. Considerable evidence indicates that a Polo-Like Kinase 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. PLKK is in turn activated by phosphorylation at three sites (Ser^{482}, Ser^{486} and Ser^{490}). Thus, activation of PLK involves a kinase cascade that includes the phosphorylation of serines 482, 486,490 in PLKK.

Reagent

Supplied as a solution at 100 µL in 10 mM HEPES, pH 7.5, 150 mM NaCl, 100 µg/mL BSA and 50% glycerol.

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 °C. For extended storage, upon initial thawing, freeze in working aliquots. Do not store in frost-free freezers. Avoid repeated freezing and thawing to prevent denaturing the antibody. 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 amount of the reagent supplied is sufficient for 10 blots.
A minimum working dilution of 1:1000 is determined by immunoblotting, using *Xenopus* lysates.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Erikson E et al., A feedback loop in the polo-like kinase activation pathway. *J. Biol. Chem*. **279**, 32219-32224 (2004).
2. Kumagai A. et al. Purification and molecular cloning of Plx1, a Cdc25-regulatory kinase from Xenopus egg extracts. *Science*, **273**, 1377-1380 (1996).
3. Liu J et al., The polo box is required for multiple functions of Plx1 in mitosis J. Biol. Chem. **279**, 21367-21373 (2004).

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