

anti-Plk1

Cat #: HM1287
Goat polyclonal IgG
0.2 µg/µl, store at 4 °C

For research use only

BACKGROUND

Plks (polo-like kinases) are serine/threonine kinases that are closely related to proteins encoded by polo in *Drosophila* and CDC5 gene in *Saccharomyces*. Three Plks have been identified: Plk1, Plk2 (also designated Snk for serum-inducible kinase) and Plk3 (also designated Fnk for FGF-inducible kinase or PRK). Plk1 localizes to the mitotic spindle, and is involved in regulating mitotic spindle function. Cells transformed with Plk1 grew in soft agar and produced tumors in nude mice, suggesting that Plk1 may be involved in the promotion or progression of cancers and Plk1 may serve as a marker of cell proliferation.

SPECIFICITY

This antibody specifically recognizes Plk1 of mouse, rat and human origin.

The antibody can be used in Western blotting, immunoprecipitation and immunostaining.

IMMUNOGEN

A recombinant protein corresponding to the carboxy terminus of human Plk1.

STORAGE

This antibody is stable for 12 months when stored at 2-8°C.

REFERENCES

1. Hamanaka, R., Maloid, S., Smith, M.R., O'Connell, C.D., Longo, D.L., and Ferris, D.K. 1994. Cloning and characterization of human and murine homologues of the *Drosophila* polo serine/threonine kinase. *Cell Growth Differ.* 5: 249-257.
2. Lake, R.J. and Jelenik, W.R. 1993. Cell cycle- and terminal differentiation-associated regulation of the mouse mRNA encoding a conserved mitotic protein kinase. *Mol. Cell. Biol.* 73: 7793-7801.
3. Sunkel, C.E. and Glover, D.M. 1988. Polo, a mitotic mutant of *Drosophila* displaying abnormal spindle poles. *J. Cell Sci.* 89: 25-38.
4. Kitada, K., Johnson, A.L., Johnston, L.H., and Sugino, A. 1993. A multicopy suppressor gene of the *Saccharomyces cerevisiae* G1 cell cycle mutant gene *dbf4* encodes a protein kinase and is identified as CDC5. *Mol. Cell. Biol.* 13: 4445-4457.
5. Holtrich, U., Wolf, G., Brauninger, A., Karn, T., Bohme, B., Rubsamen-Waigmann, H., and Strebhardt, K. 1994. Induction and down-regulation of PLK, a human serine/threonine kinase expressed in proliferating cells and tumors. *Proc. Natl. Acad. Sci. USA* 91: 1736-1740.
6. Golsteyn, R.M., Schultz, S.J., Bartek, J., Ziemicki, A., Ried, T., and Nigg, E.A. 1994. Cell cycle analysis and chromosomal localization of human Plk1, a putative homologue of the mitotic kinases *Drosophila* polo and

Saccharomyces cerevisiae Cdc5. *J. Cell Sci.* 107: 1509-1517.

7. Jang, Y.J., Lin, C.Y., Ma, S. and Erikson, R.L. 2002. Functional studies on the role of the C-terminal domain of mammalian polo-like kinase. *Proc. Natl. Acad. Sci. U.S.A.* 99, 1984-1989.
8. Yuan, J., Eckerdt, F., Bereiter-Hahn, J., Kurunci-Csacsco, E., Kaufmann, M. and Strebhardt, K. 2002. Cooperative phosphorylation including the activity of polo-like kinase 1 regulates the subcellular localization of cyclin B1. *Oncogene* 21, 8282-8292.
9. Elia, A.E., Cantley, L.C. and Yaffe, M.B. 2003. Proteomic screen finds pSer/pThr-binding domain localizing Plk1 to mitotic substrates. *Science* 299, 1228-1231.

PRODUCTS FROM HYPROMATRIX, INC.**A. AntibodyArray™s:**

1. Signal Transduction AntibodyArray™
Catalog Number HM3000
2. Apoptosis AntibodyArray™
Catalog Number HM4000
3. Cell Cycle AntibodyArray™
Catalog Number HM5000

B. Staining AntibodyArray™s

1. Staining AntibodyArray™ I
Catalog Number HM8100
2. AntibodyArray Staining Apparatus
Catalog Number HM8000

C. Antibodies**1. HRP-conjugated antibodies**

- anti-phosphotyrosine
Catalog Number HM2040
- anti-phosphoserine
Catalog Number HM2070
- anti-phosphothreonine
Catalog Number HM2090

and more...

2. Primary antibodies

Hypromatrix offers a variety of high quality antibodies. For a complete list of antibodies and their specificities, please visit our web site at www.hypromatrix.com.

CONTACT

Hypromatrix, Inc.
100 Barber Avenue
Worcester, MA 01606
USA

Tel: 508-856-7900
Fax: 508-302-0748
Email: contact@hypromatrix.com
Web: www.hypromatrix.com