

Purified anti-PLK-1

Catalog #/ 618501 / 50 µl (5 Western blots)

Size: 618502 / 200 µl (20 Western blots)

Clone: Poly6185

Isotype: Rabbit IgG

Immunogen: Recombinant (partial)

Reactivity: Human

Preparation: The antibody was purified by antigen-affinity chromatography.

Formulation: This antibody is provided in phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 50% glycerol.

Storage: Upon receipt, store frozen at -20° C.

Applications

Applications: WB, IF, IP

Recommended Each lot of this antibody is quality control tested by Western blotting. Western blotting,

Usage: suggested working dilution(s): Use at 1:250-1:500 dilutions (5 ml total volume recommended for each mini-gel.) For immunofluorescence microscopy: Use a starting dilution of 1:100. It is recommended that the reagent be titrated for optimal performance for each application.

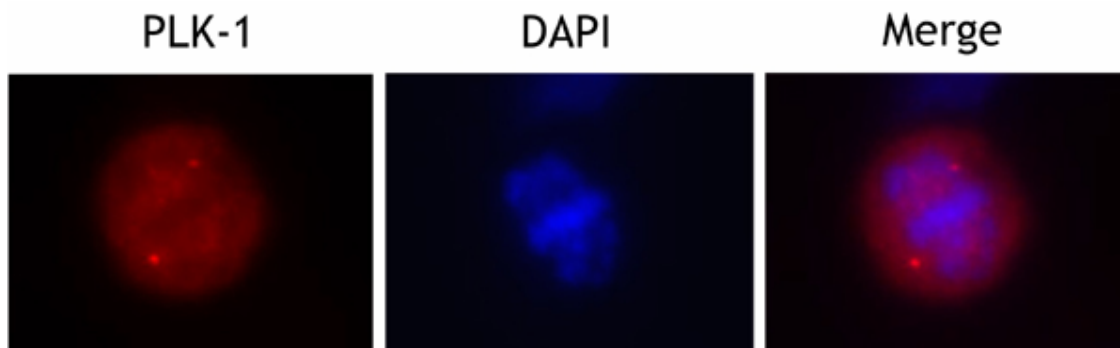


Figure 1. Overnight nocodazole treated HeLa cells stained with purified rabbit polyclonal antibody against PLK-1, followed by Rhodamine Red-X conjugated goat anti-rabbit IgG and DAPI.

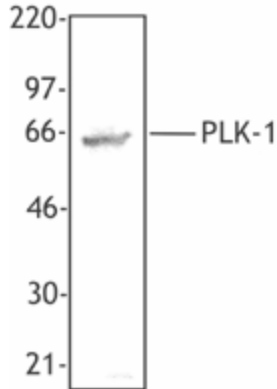


Figure 2. HeLa cell extract was resolved by electrophoresis, transferred to nitrocellulose and probed with rabbit anti-PLK-1 antibody. Proteins were visualized using a donkey anti-rabbit secondary conjugated to HRP and a chemiluminescence detection system.

Antigen Information

Other Names: Serine/Threonine protein kinase PLK, Polo-like kinase (PLK), Serine-threonine protein kinase 13

Structure: Serine/Threonine family of protein kinases, cdc5/polo subfamily. Highly homologous to polo-like kinase (*Drosophila*). Contains two polo box domains. Predicted molecular weight 68 kD

Distribution: Nuclear protein, highly expressed in placenta and colon

Function: Regulates cdc2/cyclin B through phosphorylation and activation of cdc25c phosphatase. May be required for cell division. Depletion of PLK-1 results in apoptosis

Regulation: Upregulated by growth stimulating agents. Regulated by cell cycle position (highest in G2/M phase and declines to nearly undetectable levels after mitosis and throughout G1)

Modifications: Phosphorylation

Interactions: Interacts with nuclear distribution gene C

Description: PLK-1 (polo-like kinase 1) is a member of the serine/threonine protein kinase family, cdc5/polo subfamily. Highly homologous to polo-like kinase (*Drosophila*), PLK-1 contains two polo box domains with a predicted molecular weight of 68 kD. This nuclear protein is highly expressed in placenta and colon and has been shown to regulate cdc2/cyclin B through phosphorylation and activation of cdc25c phosphatase. PLK-1 may also be required for cell division; depletion of PLK-1 results in apoptosis. PLK-1 is upregulated by growth stimulating agents and is regulated by cell cycle position (highest in G2/M phase, declining to nearly undetectable levels after mitosis and throughout G1). PLK-1 is modified by phosphorylation (Thr210 is the major phosphorylation site in activated PLK-1 from mitotic cells) and has been shown to interact with nuclear distribution gene C. The Poly6185 antibody recognizes human PLK-1 and has been shown to be useful for Western blotting and immunoprecipitation.

Antigen References:

1. Hamanaka, R., *et al.*, 1994. *Cell Growth Differ.* 5:249.
2. Lake, R. J., *et al.*, 1993. *Mol. Cell. Biol.* 13:7793.
3. Holtrich, U., *et al.*, 1994. *PNAS* 91:1736.