Technical Data Sheet

Purified Mouse anti-PLK1 (pT210)

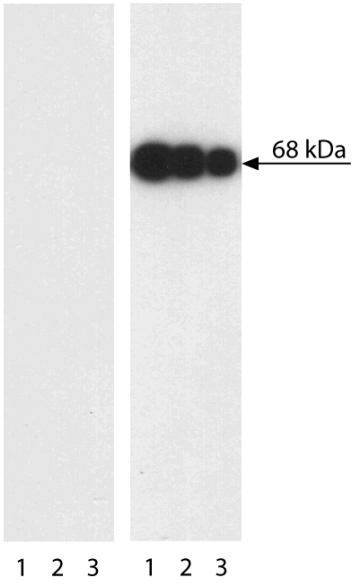
Product Information

Material Number:	**558400**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	K50-483
Immunogen:	Phosphorylated Human PLK1 Peptide
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human Predicted Reactivity: Mouse
Target MW:	68 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Polo-like kinase (PLK1) is a serine/threonine kinase with structural similarities to Drosophila's Polo kinase and the Cdc5p of Saccharomyces cerevisiae. Like its invertebrate counterparts, PLK1 activity is required for DNA synthesis and is regulated throughout the cell cycle. Furthermore, PLK1 is highly expressed in primary tumors. It associates with the mitotic spindle during mitosis suggesting that, in addition to its role during S phase, PLK1 may play a role during chromosome segregation. This is consistent with its potential role in cancer development. Threonine 210 (T210) is one of the major phoshorylation sites in activated PLK1 obtained from human mitotic cells.

The K50-483 monoclonal antibody recognizes the phosphorylated T210 of human PLK1.



Western blot analysis of PLK1 (pT210) in transformed human epithelioid carcinoma. *Lysates from HeLa S3 cell line were probed with purified mouse anti-PLK1 (pT210) monoclonal antibody at concentrations of 0.063, 0.032, and 0.016 µg/ml (Lanes 1, 2, and 3, respectively) with (left panel) or without (right panel) lambda protein phosphatase treatment. PLK1 (pT210) is identified as a band of 68 kDa in the untreated cells.*

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested

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Product Notices

1. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
2. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Ando K, Ozaki T, Yamamoto H, et al. Polo-like kinase 1 (Plk1) inhibits p53 function by physical interaction and phosphorylation. *J Biol Chem.* 2004; 279(24):25549-25561. (Biology)

Jang Y-J, Ma S, Terada Y, Erikson RL. Phosphorylation of threonine 210 and the role of serine 137 in the regulation of mammalian Polo-like kinase. *J Biol Chem.* 2002; 277(46):44115-44120. (Biology)

Peter B, Gleixner K, Cerny-Reiterer S, et al. Polo-like kinase-1 as a novel target in neoplastic mast cells: demonstration of growth-inhibitory effects of small interfering RNA and the polo-like kinase-1 targeting drug BI 2536. *Haematologica.* 2011; 96(5):672-680. (Clone-specific: Immunocytochemistry (cytospins))

Yamashiro S, Yamakita Y, Totsukawa G, et al. Myosin phosphatase targeting subunit1 regulates mitosis by antagonizing polo-like kinase1. *Dev Cell.* 2008; 14(5):787-797. (Clone-specific: Immunofluorescence, Western blot)

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