

Product name:	PLK1 Mouse Monoclonal Antibody
Cat number:	MABN81159
Conjugate:	Unconjugated
Size:	100μL
Clone:	Monoclonal
Concentration:	1mg/ml
Host:	Mouse
Isotype:	Mouse IgG1
Immunogen:	Purified recombinant fragment of human PLK1 (AA: 331-508) expressed in E. Coli.
Reactivity:	Human
Applications:	ICC 1:20-1:50,ELISA 1:5000-1:20000
Molecular Weight:	68kDa
Purification:	Affinity Purification
Form:	Liquid
Buffer:	Purified antibody in PBS with 0.05% sodium azide
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.
Background:	PLK1 is critical for the initiation of centrosome maturation. Polo-like kinases (PLKs) are a family of four serine/threonine protein kinases that are critical regulators of cell cycle progression, mitosis, cytokinesis, and the DNA damage response. PLK1, -2 and -3 are ubiquitously expressed, whereas PLK4 is restricted to a few tissues including the testes and the thymus. The mRNA and protein expression of PLK1, -2 and -4 are coordinately regulated during cell cycle progression, but PLK3 levels are independent of the other three family members. Furthermore, PLK3 is a much more stable protein than PLK1, -2 or -4. PLK1 is the most well characterized member of this family and strongly promotes the progression of cells through mitosis. During the various stages of mitosis PLK1 localizes to the centrosomes, kinetochores and central spindle. PLKs are dysregulated in a variety of human cancers. PLK1 overexpression correlates with cellular proliferation and poor prognosis. PLK2 and PLK3 are involved in checkpoint-mediated cell cycle arrest to ensure genetic stability. Loss-of-function mutations in these enzymes can lead to oncogenic transformation.