



## Rabbit Anti-PLK1 antibody

SL3535R

<b>Product Name:</b>	PLK1
<b>Chinese Name:</b>	丝氨酸/苏氨酸蛋白激酶Plk1抗体
<b>Alias:</b>	PLK 1; PLK; polio like kinase; Polo like kinase 1; Polo-like kinase 1; Serine/threonine protein kinase 13; Serine/threonine protein kinase PLK1; Serine/threonine-protein kinase; STPK 13; STPK13; Polo like kinase kinase; Cell cycle regulated protein kinase; PLK-1; plk1; PLK1_HUMAN.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Dog,Pig,Rabbit,
<b>Applications:</b>	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	66kDa
<b>Cellular localization:</b>	The nucleuscytoplasmic
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human PLK1:201-300/603
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	PLK1 (polo-like kinase 1) is a member of the serine/threonine protein kinase family, cdc5/polo subfamily. PLK1 contains two polo box domains with a predicted molecular weight of 68 kDa. PLK1 has been shown to regulate cdc2/cyclin B through phosphorylation and activation of cdc25c phosphatase. PLK1 is modified by

phosphorylation at Threonine 210. PLK1 may also be required for cell division. Depletion of PLK1 results in apoptosis and deregulation of expression of PKL1 is correlated with development of many malignancies.

**Function:**

Serine/threonine-protein kinase that performs several important functions throughout M phase of the cell cycle, including the regulation of centrosome maturation and spindle assembly, the removal of cohesins from chromosome arms, the inactivation of APC/C inhibitors, and the regulation of mitotic exit and cytokinesis. Required for recovery after DNA damage checkpoint and entry into mitosis. Required for kinetochore localization of BUB1B. Phosphorylates SGOL1. Required for spindle pole localization of isoform 3 of SGOL1 and plays a role in regulating its centriole cohesion function. Phosphorylates BORA, and thereby promotes the degradation of BORA. Contributes to the regulation of AURKA function. Regulates TP53 stability through phosphorylation of TOPORS.

**Subunit:**

Interacts with CEP170 and EVI5. Interacts and phosphorylates ERCC6L. Interacts with FAM29A. Interacts with SLX4/BTBD12 and TTDN1. Interacts with BUB1B. Interacts (via POLO-box domain) with the phosphorylated form of BUB1, MLF1IP and CDC25C. Interacts with isoform 3 of SGOL1. Interacts with BORA, KIF2A and AURKA. Interacts with TOPORS and CYLD. Interacts with ECT2; the interaction is stimulated upon phosphorylation of ECT2 on 'Thr-444'. Interacts with PRC1. Interacts with KIF20A/MKLP2 (when phosphorylated), leading to the recruitment at the central spindle. Interacts (via POLO box domains) with PPP1R12A/MYPT1 (when previously phosphorylated by CDK1). Part of an astrin (SPAG5)-kinastrin (SKAP) complex containing SKAP, SPAG5, PLK1, DYNLL1 and SGOL2. Interacts with BIRC6/bruce.

**Subcellular Location:**

Nucleus. Chromosome, centromere, kinetochore. Cytoplasm, cytoskeleton, centrosome. Cytoplasm, cytoskeleton, spindle. Midbody. Note=During early stages of mitosis, the phosphorylated form is detected on centrosomes and kinetochores. Localizes to the outer kinetochore. Presence of SGOL1 and interaction with the phosphorylated form of BUB1 is required for the kinetochore localization. Localizes onto the central spindle by phosphorylating and docking at midzone proteins KIF20A/MKLP2 and PRC1.

**Tissue Specificity:**

Placenta and colon.

**Similarity:**

Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. CDC5/Polo subfamily.

Contains 2 POLO box domains.

Contains 1 protein kinase domain.

**SWISS:**

P53350

**Gene ID:**  
5347

**Database links:**

[Entrez Gene: 5347](#) Human

[Entrez Gene: 18817](#) Mouse

[Entrez Gene: 25515](#) Rat

[Omim: 602098](#) Human

[SwissProt: P53350](#) Human

[SwissProt: Q07832](#) Mouse

[SwissProt: Q62673](#) Rat

[Unigene: 592049](#) Human

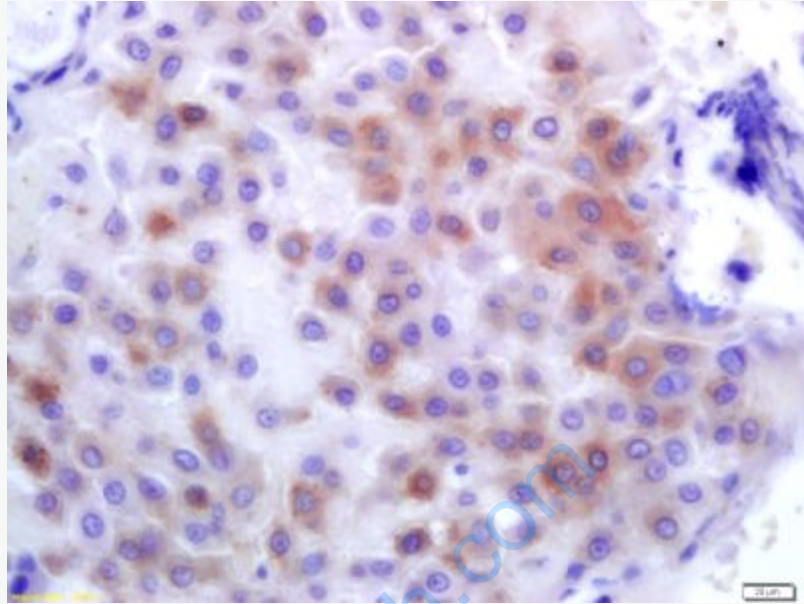
[Unigene: 16525](#) Mouse

[Unigene: 11034](#) Rat

**Important Note:**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PLK1 (Polo like kinase 1) 是一种广泛存在于真核细胞中的丝/苏氨酸激酶, 在细胞周期调控中发挥重要的调控作用。PLK1主要功能包括参与激活cyclin B/CDK1 复合体, 协助中心体的功能成熟, 促进染色体正常分离、分配和调控细胞胞质分裂等。



**Picture:**

Tissue/cell: human placenta tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-PLK1 Polyclonal Antibody, Unconjugated(SL3535R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining