

**Anti-PLK3 Antibody**  
**Rabbit polyclonal antibody to PLK3**  
**Catalog # AP60998****Specification**

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**Anti-PLK3 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">Q9H4B4</a>
Other Accession	<a href="#">Q60806</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	71629

**Anti-PLK3 Antibody - Additional Information****Gene ID** 1263**Other Names**

CNK; FNK; PRK; Serine/threonine-protein kinase PLK3; Cytokine-inducible serine/threonine-protein kinase; FGF-inducible kinase; Polo-like kinase 3; PLK-3; Proliferation-related kinase

**Target/Specificity**

Recognizes endogenous levels of PLK3 protein.

**Dilution**

WB~~WB (1/500 - 1/1000)

**Format**

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

**Storage**

Store at -20 °C.Stable for 12 months from date of receipt

**Anti-PLK3 Antibody - Protein Information****Name** PLK3**Synonyms** CNK, FNK, PRK**Function**

Serine/threonine-protein kinase involved in cell cycle regulation, response to stress and Golgi disassembly. Polo-like kinases act by binding and phosphorylating proteins that are already phosphorylated on a specific motif recognized by the POLO box domains. Phosphorylates ATF2, BCL2L1, CDC25A, CDC25C, CHEK2, HIF1A, JUN, p53/TP53, p73/TP73, PTEN, TOP2A and VRK1. Involved in cell cycle regulation: required for entry into S phase and cytokinesis. Phosphorylates BCL2L1, leading to regulate the G2 checkpoint and progression to cytokinesis during mitosis. Plays

a key role in response to stress: rapidly activated upon stress stimulation, such as ionizing radiation, reactive oxygen species (ROS), hyperosmotic stress, UV irradiation and hypoxia. Involved in DNA damage response and G1/S transition checkpoint by phosphorylating CDC25A, p53/TP53 and p73/TP73. Phosphorylates p53/TP53 in response to reactive oxygen species (ROS), thereby promoting p53/TP53-mediated apoptosis. Phosphorylates CHEK2 in response to DNA damage, promoting the G2/M transition checkpoint. Phosphorylates the transcription factor p73/TP73 in response to DNA damage, leading to inhibit p73/TP73-mediated transcriptional activation and pro-apoptotic functions. Phosphorylates HIF1A and JUN in response to hypoxia. Phosphorylates ATF2 following hyperosmotic stress in corneal epithelium. Also involved in Golgi disassembly during the cell cycle: part of a MEK1/MAP2K1-dependent pathway that induces Golgi fragmentation during mitosis by mediating phosphorylation of VRK1. May participate in endomitotic cell cycle, a form of mitosis in which both karyokinesis and cytokinesis are interrupted and is a hallmark of megakaryocyte differentiation, via its interaction with CIB1.

#### **Cellular Location**

Cytoplasm. Nucleus. Nucleus, nucleolus. Golgi apparatus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=Translocates to the nucleus upon cisplatin treatment Localizes to the Golgi apparatus during interphase. According to a report, PLK3 localizes only in the nucleolus and not in the centrosome, or in any other location in the cytoplasm (PubMed:17264206). The discrepancies in results may be explained by the PLK3 antibody specificity, by cell line-specific expression or post-translational modifications.

#### **Tissue Location**

Transcripts are highly detected in placenta, lung, followed by skeletal muscle, heart, pancreas, ovaries and kidney and weakly detected in liver and brain. May have a short half-life. In cells of hematopoietic origin, strongly and exclusively detected in terminally differentiated macrophages. Transcript expression appears to be down-regulated in primary lung tumor

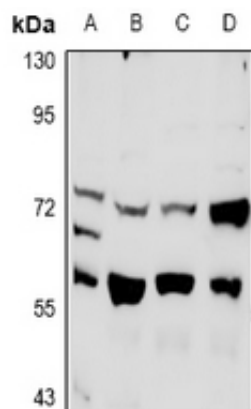
#### **Anti-PLK3 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **Anti-PLK3 Antibody - Images**





Western blot analysis of PLK3 expression in PC12 (A), CT26 (B), A549 (C), H1792 (D) whole cell lysates.

#### **Anti-PLK3 Antibody - Background**

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human PLK3. The exact sequence is proprietary.