

**PLK3 Antibody (aa320-333)**  
**Goat Polyclonal Antibody**  
**Catalog # ALS16141****Specification**

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**PLK3 Antibody (aa320-333) - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">Q9H4B4</a>
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Calculated MW	72kDa KDa

**PLK3 Antibody (aa320-333) - Additional Information****Gene ID** 1263**Other Names**

Serine/threonine-protein kinase PLK3, 2.7.11.21, Cytokine-inducible serine/threonine-protein kinase, FGF-inducible kinase, Polo-like kinase 3, PLK-3, Proliferation-related kinase, PLK3, CNK, FNK, PRK

**Target/Specificity**

Human PRK / PLK3

**Reconstitution & Storage**

Store at -20°C. Minimize freezing and thawing.

**Precautions**

PLK3 Antibody (aa320-333) is for research use only and not for use in diagnostic or therapeutic procedures.

**PLK3 Antibody (aa320-333) - 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. 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.

#### PLK3 Antibody (aa320-333) - Protocols

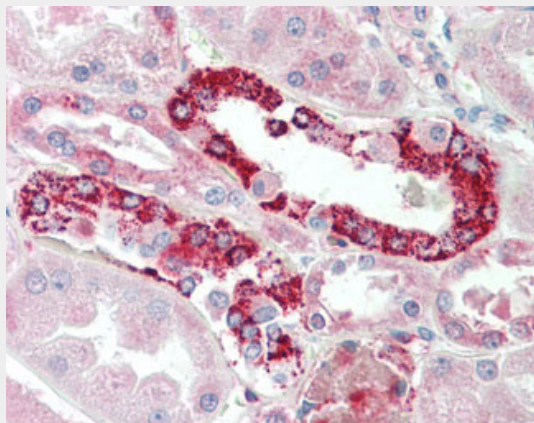
Provided below are standard protocols that you may find useful for product applications.

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

#### PLK3 Antibody (aa320-333) - Images



PLK3 antibody (2 ug/ml) staining of HeLa lysate (35 ug protein in RIPA buffer).



Anti-PRK / PLK3 antibody IHC staining of human kidney.

### **PLK3 Antibody (aa320-333) - Background**

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### **PLK3 Antibody (aa320-333) - References**

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Gregory S.G., et al. *Nature* 441:315-321(2006).  
Mural R.J., et al. Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.  
Li B., et al. *J. Biol. Chem.* 271:19402-19408(1996).  
Wiest J., et al. *Genes Chromosomes Cancer* 32:384-389(2001).