

Rabbit PLK3 Polyclonal Antibody | anti-PLK3 antibody

PLK3 Antibody

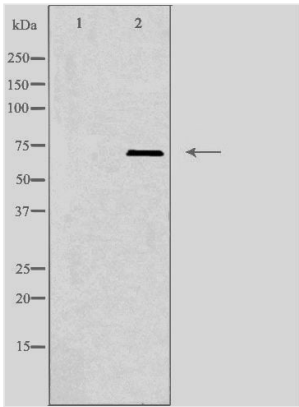
CATALOG # AAA325121	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Immunocytochemistry, Immunofluorescence, Western Blot
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PRODUCT SYNONYMS

PLK3; Polyclonal Antibody; PLK3 Antibody; CNK; Cytokine Inducible Kinase; Cytokine-inducible serine/threonine-protein kinase; FGF inducible kinase; FGF-inducible kinase; FNK; PLK-3; Plk3; PLK3_HUMAN; Polo Like Kinase 3; Polo-like kinase 3; PRK; Proliferation Related Kinase; Proliferation-related kinase; Serine/threonine-protein kinase PLK3; anti-PLK3 antibody

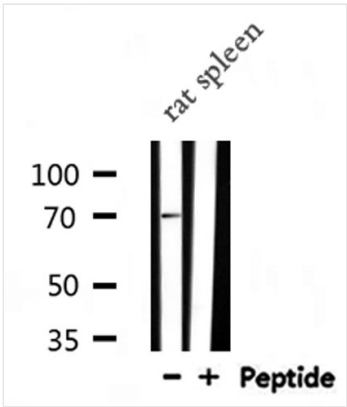
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	PLK3 antibody detects endogenous levels of total PLK3
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	646
Applicable Applications for anti-PLK3 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide
Subcellular Location	Membrane.
Tissue Specificity	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-live. In cells of hematopoietic origin, strongly and exclusively detected in terminally differentiated macrophages. Transcript expression appears to be down-regulated in primary lung tumor.
Predicted Cross Reactivity	Pig, Zebrafish, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (91%), Zebrafish (91%), Bovine (91%), Horse (91%), Sheep (91%), Rabbit (100%), Dog (91%), Chicken (91%), Xenopus (91%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



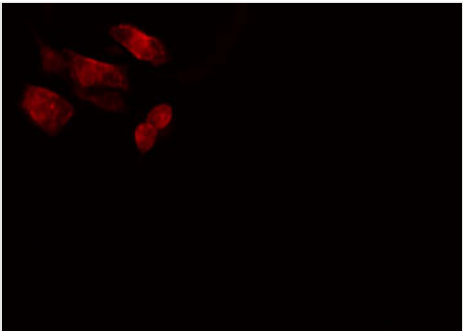
WB (Western Blot)

Western blot analysis of extracts from HepG2 cells, using PLK3 antibody. The lane on the left is treated with the antigen-specific peptide.



WB (Western Blot)

Western blot analysis of PLK3 expression in Rat spleen lysate



IF (Immunofluorescence)

AAA325121 staining HepG2 cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-PLK3 antibody	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 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. Subunit Structure: Interacts (via the POLO-box domain) with CIB1; leading to inhibit PLK3 kinase activity. Interacts with GOLGB1. Post-translational Modifications: Phosphorylated in an ATM-dependent manner following DNA damage. Phosphorylated as cells enter mitosis and dephosphorylated as cells exit mitosis. Similarity: The POLO box domains act as phosphopeptide-binding module that recognize and bind serine-[phosphothreonine/phosphoserine]-(proline/X) motifs. PLK3 recognizes and binds docking proteins that are already phosphorylated on these motifs, and then phosphorylates them (By similarity). The POLO box domains mediate localization to the centrosome. Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. CDC5/Polo subfamily.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	41872374
NCBI GeneID	1263
NCBI Accession #	NP_004064.2
NCBI GenBank Nucleotide #	NM_004073.3
UniProt Accession #	Q9H4B4; Q15767; Q5JR99; Q96CV1
Molecular Weight	Observed: 70 kD Predicted: 72 kDa
NCBI Official Full Name	serine/threonine-protein kinase PLK3
NCBI Official Synonym Full Names	polo like kinase 3
NCBI Official Symbol	PLK3
NCBI Official Synonym Symbols	CNK; FNK; PRK; PLK-3
NCBI Protein Information	serine/threonine-protein kinase PLK3
UniProt Protein Name	Serine/threonine-protein kinase PLK3
UniProt Gene Name	PLK3
UniProt Synonym Gene Names	CNK; FNK; PRK; PLK-3

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.