

PLK3 Antibody

Catalog No: #35023

Package Size: #35023-1 50ul #35023-2 100ul

Orders: order@signalwayantibody.comSupport: tech@signalwayantibody.com

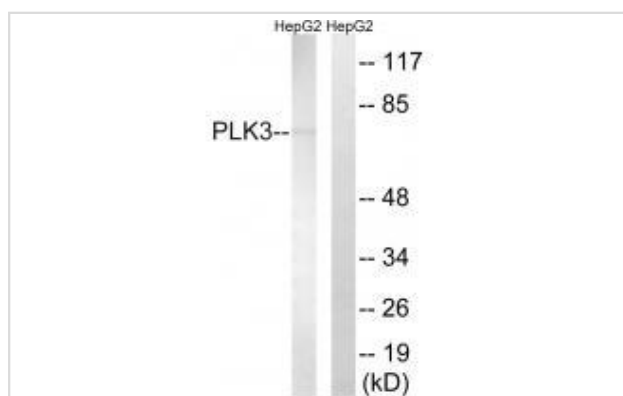
Description

Product Name	PLK3 Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Applications	WB
Species Reactivity	Hu
Specificity	The antibody detects endogenous levels of total PLK3 protein.
Immunogen Type	Peptide
Immunogen Description	Synthesized peptide derived from internal of human PLK3.
Target Name	PLK3
Other Names	EC 2.7.11.21; Polo-like kinase 3; PLK-3; Cytokine-inducible serine/threonine-protein kinase; FGF-inducible kinase
Accession No.	Swiss-Prot: Q9H4B4NCBI Gene ID: 1263
Uniprot	Q9H4B4
GeneID	1263;
SDS-PAGE MW	70kd
Concentration	1.0mg/ml
Formulation	Rabbit IgG in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C

Application Details

Western blotting: 1:500~1:3000

Images



Western blot analysis of extracts from HepG2 cells, using PLK3 antibody #35023.

Background

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.

Holtrich U., *Oncogene* 19:4832-4839(2000).

Gregory S.G., *Nature* 441:315-321(2006).

Mural R.J., Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Note: This product is for in vitro research use only