PLK1 Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	PLK1, Blocking Peptide
Full Product Name	PLK1 Blocking Peptide
Product Gene Name	PLK1 blocking peptide
Product Synonym Names	Cell cycle regulated protein kinase; PLK 1; PLK; PLK-1; plk1; PLK1_HUMAN; Polo like kinase 1; Polo-like kinase 1; Serine/threonine protein kinase 13; Serine/threonine protein kinase PLK1; Serine/threonine-protein kinase 13; Serine/threonine-protein kinase PLK1; STPK 13; STPK13
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	PLK1 peptide (MBS9618831) is used for blocking the activity of PLK1 antibody (MBS9611110)
Molecular Weight	68,255 Da
Chromosome Location	Chromosome: 16; NC_000016.9 (23690201..23701688). Location: 16p12.2
OMIM	602098
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for PLK1 blocking peptide	Blocking/Control
Related Product Information for PLK1 blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of PLK1 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PLK1 purchase	MBS9618831 is a blocking peptide targeting PLK1.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PLK1. It may not necessarily be applicable to this product.

NCBI GI #	21359873
NCBI GeneID	5347
NCBI Accession #	NP_005021.2
UniProt Primary Accession #	P53350

UniProt Secondary Accession #	Q15153; Q99746
UniProt Related Accession #	P53350
GenBank Nucleotide #	NP_005021.2
NCBI Official Full Name	serine/threonine-protein kinase PLK1
NCBI Official Synonym Full Names	polo-like kinase 1
NCBI Official Symbol	PLK1
NCBI Official Synonym Symbols	PLK; STPK13
UniProt Protein Name	Serine/threonine-protein kinase PLK1
UniProt Synonym Protein Names	Polo-like kinase 1; PLK-1; Serine/threonine-protein kinase 13
Protein Family	Serine/threonine-protein kinase
UniProt Gene Name	PLK1
UniProt Synonym Gene Names	PLK; PLK-1; STPK13
UniProt Entry Name	PLK1_HUMAN
NCBI Protein Information	serine/threonine-protein kinase PLK1; PLK-1; polo like kinase; polo (Drosophia)-like kinase; serine/threonine-protein kinase 13; cell cycle regulated protein kinase
NCBI Summary for PLK1	The Ser/Thr protein kinase encoded by this gene belongs to the CDC5/Polo subfamily. It is highly expressed during mitosis and elevated levels are found in many different types of cancer. Depletion of this protein in cancer cells dramatically inhibited cell proliferation and induced apoptosis; hence, it is a target for cancer therapy. [provided by RefSeq, Sep 2015]
UniProt Comments for PLK1	PLK1: a kinase of the PLK family. Contains a polo-box domain (PBD), a specific phosphoserine or phosphothreonine binding domain. Substrates include BRCA2, Myt1, NudC, Cdc25C, cyclin B1, Nlp and other mitotic proteins. Inhibited by ATR. Plays a role in regulation of cytokinesis and coordinating M-phase events. Protein type: Protein kinase, Ser/Thr (non-receptor); EC 2.7.11.21; Protein kinase, Other; Kinase, protein; Other group; PLK family Chromosomal Location of Human Ortholog: 16p12.2 Cellular Component: spindle pole; centrosome; cytosol; nucleoplasm; kinetochore; microtubule cytoskeleton; spindle microtubule; cytoplasm; nucleolus; spindle; midbody; spindle midzone; nucleus Molecular Function: protein serine/threonine kinase activity; protein binding; microtubule binding; kinase activity; protein kinase binding; ATP binding; protein kinase activity Biological Process: positive regulation of ubiquitin-protein ligase activity during mitotic cell cycle; regulation of cell cycle; positive regulation of proteolysis; regulation of mitotic cell cycle; mitotic nuclear envelope disassembly; cytokinesis; protein ubiquitination; anaphase-promoting complex activation during mitotic cell cycle; negative regulation of transcription from RNA polymerase II promoter; protein amino acid phosphorylation; response to antibiotic; establishment of protein localization; cytokinesis after mitosis; anaphase-promoting complex-dependent proteasomal ubiquitin-dependent protein catabolic process; centrosome organization and biogenesis; positive regulation of ubiquitin-protein ligase activity; mitotic cell cycle spindle assembly checkpoint; G2/M transition of mitotic cell cycle; mitosis; mitotic sister chromatid segregation; protein destabilization; organelle organization and biogenesis; regulation of mitotic metaphase/anaphase transition; negative regulation of cyclin-dependent protein kinase activity; cell proliferation; peptidyl-serine phosphorylation; regulation of ubiquitin-protein ligase activity during mitotic cell cycle; regulation of protein binding; positive regulation of proteasomal ubiquitin-dependent protein catabolic process; polar body extrusion after meiotic divisions; mitotic cell cycle; G2/M transition DNA damage checkpoint; microtubule bundle formation; mitotic metaphase/anaphase transition; negative regulation of apoptosis
Research Articles on PLK1	**1.** Plk1 phosphorylates MISP, thus stabilizing cortical and astral microtubule attachments required for proper mitotic spindle positioning.

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