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# PLK4 Blocking Peptide (C-Term)

**Synthetic peptide**
**Catalog # BP21686b**

## Specification

### PLK4 Blocking Peptide (C-Term) - Product Information

Primary Accession O00444

### PLK4 Blocking Peptide (C-Term) - Additional Information

**Gene ID** 10733

**Other Names**
Serine/threonine-protein kinase PLK4, Polo-like kinase 4, PLK-4, Serine/threonine-protein kinase 18, Serine/threonine-protein kinase Sak, PLK4, SAK, STK18

**Target/Specificity**
The synthetic peptide sequence is selected from aa 724-758 of HUMAN PLK4

**Format**
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

### PLK4 Blocking Peptide (C-Term) - Protein Information

**Name** PLK4 (HGNC:11397)

**Synonyms** SAK, STK18

**Function**
Serine/threonine-protein kinase that plays a central role in centriole duplication. Able to trigger procentriole formation on the surface of the parental centriole cylinder, leading to the recruitment of centriole biogenesis proteins such as SASS6, CPAP, CCP110, CEP135 and gamma-tubulin. When overexpressed, it is able to induce centrosome amplification through the simultaneous generation of multiple procentrioles adjoining each parental centriole during S phase. Phosphorylates 'Ser-151' of FBXW5 during the G1/S transition, leading to inhibit FBXW5 ability to ubiquitinate SASS6. Its central role in centriole replication suggests a possible role in tumorigenesis, centrosome aberrations being frequently observed in tumors. Also involved in deuterosome-mediated centriole amplification in multiciliated that can generate more than 100 centrioles. Also involved in trophoblast differentiation by phosphorylating HAND1, leading to disrupt the interaction between HAND1 and MDFIC and activate HAND1. Phosphorylates CDC25C and CHEK2. Required for the recruitment of STIL to the centriole and for STIL-mediated centriole

amplification (PubMed:<a href="http://www.uniprot.org/citations/22020124" target="_blank">22020124</a>). Phosphorylates CEP131 at 'Ser-78' and PCM1 at 'Ser- 372' which is essential for proper organization and integrity of centriolar satellites (PubMed:<a href="http://www.uniprot.org/citations/30804208" target="_blank">30804208</a>).

**Cellular Location**
Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Nucleus, nucleolus {ECO:0000250|UniProtKB:Q64702}. Cleavage furrow {ECO:0000250|UniProtKB:Q64702}. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=Component of the deuterosome, a structure that promotes de novo centriole amplification in multiciliated cells that can generate more than 100 centrioles Associates with centrioles throughout the cell cycle. According to PubMed:16244668, it is not present at cleavage furrows

## PLK4 Blocking Peptide (C-Term) - Protocols

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

- Blocking Peptides

## PLK4 Blocking Peptide (C-Term) - Images

## PLK4 Blocking Peptide (C-Term) - Background

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## PLK4 Blocking Peptide (C-Term) - References

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Yamashita Y.,et al.J. Biol. Chem. 276:39012-39020(2001).
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