10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Mouse Plk4 Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP13934b

Specification

Mouse Plk4 Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q64702

Mouse Plk4 Antibody (C-term) Blocking peptide - Additional Information

Gene ID 20873

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 used to generate the antibody AP13934b was selected from the C-term region of Mouse Plk4. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

Mouse Plk4 Antibody (C-term) Blocking peptide - Protein Information

Name Plk4 {ECO:0000312|MGI:MGI:101783}

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, CENPJ/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. Phosphorylates CDC25C and CHEK2. 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. Required for the recruitment of STIL to the centriole and for STIL-mediated centriole amplification (By similarity). Phosphorylates CEP131 at 'Ser-78' and PCM1 at 'Ser-372' which is essential for proper organization and integrity of centriolar satellites (By similarity).

Cellular Location
Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Nucleus, nucleolus. Cleavage furrow. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome {ECO:0000250|UniProtKB:O00444} Note=Associates with centrioles throughout the cell cycle. According to PubMed:11301255, it localizes to the nucleolus during G2, to the centrosomes in G2/M, and to the cleavage furrow during cytokinesis Component of the deuterosome, a structure that promotes de novo centriole amplification in multiciliated cells that can generate more than 100 centrioles

Tissue Location
expressed in tissues associated with mitotic and meiotic cell division. Highly expressed in testis

Mouse Plk4 Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

Mouse Plk4 Antibody (C-term) Blocking peptide - Images

Mouse Plk4 Antibody (C-term) Blocking peptide - Background

Plk4 is a member of the polo family ofserine/threonine protein kinases. The protein localizes to thenucleolus during G2, to centrosomes during G2/M, and to thecleavage furrow during cytokinesis. It is required for progressionthrough mitosis, cell survival, and embryonic development. Themouse genome contains a pseudogene similar to this gene.Alternatively spliced transcript variants have been described, buttheir biological validity has not been determined. [provided byRefSeq].

Mouse Plk4 Antibody (C-term) Blocking peptide - References

Rosario, C.O., et al. Proc. Natl. Acad. Sci. U.S.A. 107(15):6888-6893(2010)Holland, A.J., et al. J. Cell Biol. 188(2):191-198(2010)Morettin, A., et al. BMC Genomics 10, 319 (2009) :Martindill, D.M., et al. Nat. Cell Biol. 9(10):1131-1141(2007)Leung, G.C., et al. FEBS Lett. 581(1):77-83(2007)