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

Mouse Aurka Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP14609a

Specification

Mouse Aurka Antibody (N-term) Blocking Peptide - Product Information

Primary Accession P97477

Mouse Aurka Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 20878

Other Names
Aurora kinase A, Aurora 2, Aurora family kinase 1, Aurora/IPL1-related kinase 1, ARK-1, Aurora-related kinase 1, Ipl1- and aurora-related kinase 1, Serine/threonine-protein kinase 6, Serine/threonine-protein kinase Ayk1, Serine/threonine-protein kinase aurora-A, Aurka

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 Aurka Antibody (N-term) Blocking Peptide - Protein Information

Name Aurka

Function
Mitotic serine/threonine kinase that contributes to the regulation of cell cycle progression (By similarity). Associates with the centrosome and the spindle microtubules during mitosis and plays a critical role in various mitotic events including the establishment of mitotic spindle, centrosome duplication, centrosome separation as well as maturation, chromosomal alignment, spindle assembly checkpoint, and cytokinesis (PubMed:9245792, PubMed:19075002). Required for normal spindle positioning during mitosis and for the localization of NUMA1 and DCTN1 to the cell cortex during metaphase (By similarity). Required for initial activation of CDK1 at centrosomes (By similarity). Phosphorylates numerous target proteins, including ARHGEF2, BORA, BRCA1, CDC25B, DLGP5, HDAC6, KIF2A, LATS2, NDEL1, PARD3, PPP1R2, PLK1, RASSF1, TACC3, p53/TP53 and TPX2 (By similarity). Regulates KIF2A tubulin depolymerase activity (By similarity). Required for normal axon formation (By similarity). Plays a role in microtubule remodeling during neurite extension (PubMed:19668197). Important for microtubule formation and/or stabilization (By similarity). Also acts as a key regulatory component of the p53/TP53 pathway, and particularly the checkpoint-response

pathways critical for oncogenic transformation of cells, by phosphorylating and destabilizing p53/TP53 (By similarity). Phosphorylates its own inhibitors, the protein phosphatase type 1 (PP1) isoforms, to inhibit their activity (By similarity). Inhibits cilia outgrowth (By similarity). Required for cilia disassembly via phosphorylation of HDAC6 and subsequent deacetylation of alpha-tubulin (PubMed:20643351). Regulates protein levels of the anti-apoptosis protein BIRC5 by suppressing the expression of the SCF(FBXL7) E3 ubiquitin-protein ligase substrate adapter FBXL7 through the phosphorylation of the transcription factor FOXP1 (By similarity).

Cellular Location
Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Cell projection, neuron projection. Cell projection, cilium {ECO:0000250|UniProtKB:O14965}. Cytoplasm, cytoskeleton, cilium basal body. Basolateral cell membrane {ECO:0000250|UniProtKB:F1PNY0}. Note=Localizes on centrosomes in interphase cells and at each spindle pole in mitosis (PubMed:9245792) Associates with both the pericentriolar material (PCM) and centrioles (By similarity). Colocalized with SIRT2 at centrosome (By similarity) Detected at the neurite hillock in developing neurons (PubMed:19668197). The localization to the spindle poles is regulated by AAAS (By similarity). {ECO:0000250|UniProtKB:O14965, ECO:0000269|PubMed:19668197, ECO:0000269|PubMed:9245792}

Tissue Location
Detected in embryonic neurons in dorsal root ganglia and brain cortex (at protein level). Highly expressed in testis, in about one third of the seminiferous tubules. Expression is restricted to specific spermatocytes nearing completion of prophase, with levels falling off on transition to elongated spermatids. Highly expressed in the ovary, expression in the oocyte starts around the transition to large growing follicle. Abundant expression is seen in the proliferating granulosa and thecal cells of the growing follicle, and in the young corpus luteum. Very weakly expressed in spleen and intestine.

Mouse Aurka Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

Mouse Aurka Antibody (N-term) Blocking Peptide - Images

Mouse Aurka Antibody (N-term) Blocking Peptide - Background

Contributes to the regulation of cell cycle progression. Required for normal mitosis. Associates with the centrosome and the spindle microtubules during mitosis and functions in centrosome maturation, spindle assembly, maintenance of spindle bipolarity, centrosome separation and mitotic checkpoint control. Phosphorylates numerous target proteins, including ARHGEF2, BRCA1, KIF2A, NDEL1, PARD3, PLK1 and BORA. Regulates KIF2A tubulin depolymerase activity (By similarity). Required for normal axon formation. Plays a role in microtubule remodeling during neurite extension. Important for microtubule formation and/or stabilization.

Mouse Aurka Antibody (N-term) Blocking Peptide - References

Kinzel, D., et al. Dev. Cell 19(1):66-77(2010)Van Horn, R.D., et al. J. Biol. Chem. 285(28):21849-21857(2010)Mori, D., et al. Nat. Cell Biol. 11(9):1057-1068(2009)Li, C.C., et al. Mol. Cancer Res. 7(5):678-688(2009)Tseng, Y.S., et al. BMC Cancer 9, 435 (2009) :