

Mouse Aurkb Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP16003a**Specification**

Mouse Aurkb Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [O70126](#)**Mouse Aurkb Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 20877**Other Names**

Aurora kinase B, Aurora 1, Aurora- and IPL1-like midbody-associated protein 1, Aurora/IPL1-related kinase 2, ARK-2, Aurora-related kinase 2, STK-1, Serine/threonine-protein kinase 12, Serine/threonine-protein kinase 5, Serine/threonine-protein kinase aurora-B, Aurkb, Aik2, Aim1, Airk2, Ark2, Stk1, Stk12, Stk5

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 Aurkb Antibody (N-term) Blocking Peptide - Protein Information**Name** Aurkb**Function**

Serine/threonine-protein kinase component of the chromosomal passenger complex (CPC), a complex that acts as a key regulator of mitosis (By similarity). The CPC complex has essential functions at the centromere in ensuring correct chromosome alignment and segregation and is required for chromatin-induced microtubule stabilization and spindle assembly (By similarity). Involved in the bipolar attachment of spindle microtubules to kinetochores and is a key regulator for the onset of cytokinesis during mitosis (By similarity). Required for central/midzone spindle assembly and cleavage furrow formation (By similarity). Key component of the cytokinesis checkpoint, a process required to delay abscission to prevent both premature resolution of intercellular chromosome bridges and accumulation of DNA damage: phosphorylates CHMP4C, leading to retain abscission-competent VPS4 (VPS4A and/or VPS4B) at the midbody ring until abscission checkpoint signaling is terminated at late cytokinesis (By similarity). AURKB phosphorylates the CPC complex subunits BIRC5/survivin, CDCA8/borealin and INCENP (By similarity). Phosphorylation of INCENP leads to increased AURKB activity (By similarity). Other known AURKB substrates involved in centromeric functions and mitosis are CENPA, DES/desmin, GPAF, KIF2C, NSUN2, RACGAP1, SEPTIN1, VIM/vimentin, HASPIN, and histone H3 (By similarity). A

positive feedback loop involving HASPIN and AURKB contributes to localization of CPC to centromeres (By similarity). Phosphorylation of VIM controls vimentin filament segregation in cytokinetic process, whereas histone H3 is phosphorylated at 'Ser-10' and 'Ser-28' during mitosis (H3S10ph and H3S28ph, respectively) (PubMed:11784863). AURKB is also required for kinetochore localization of BUB1 and SGO1 (By similarity). Phosphorylation of p53/TP53 negatively regulates its transcriptional activity (By similarity). Key regulator of active promoters in resting B- and T-lymphocytes: acts by mediating phosphorylation of H3S28ph at active promoters in resting B- cells, inhibiting RNF2/RING1B-mediated ubiquitination of histone H2A and enhancing binding and activity of the USP16 deubiquitinase at transcribed genes (PubMed:24034696). Acts as an inhibitor of CGAS during mitosis: catalyzes phosphorylation of the N-terminus of CGAS during the G2-M transition, blocking CGAS liquid phase separation and activation, and thereby preventing CGAS-induced autoimmunity (By similarity). Phosphorylates KRT5 during anaphase and telophase (PubMed:29518391).

Cellular Location

Nucleus {ECO:0000250|UniProtKB:Q96GD4}. Chromosome {ECO:0000250|UniProtKB:Q96GD4}. Chromosome, centromere {ECO:0000250|UniProtKB:Q96GD4}. Chromosome, centromere, kinetochore {ECO:0000250|UniProtKB:Q96GD4}. Cytoplasm, cytoskeleton, spindle {ECO:0000250|UniProtKB:Q96GD4}. Midbody {ECO:0000250|UniProtKB:Q96GD4} Note=Localizes on chromosome arms and inner centromeres from prophase through metaphase and then transferring to the spindle midzone and midbody from anaphase through cytokinesis. Colocalized with gamma tubulin in the midbody. Proper localization of the active, Thr-237- phosphorylated form during metaphase may be dependent upon interaction with SPDYC. Colocalized with SIRT2 during cytokinesis with the midbody Localization (and probably targeting of the CPC) to the inner centromere occurs predominantly in regions with overlapping mitosis- specific histone phosphorylations H3pT3 and H2ApT12 {ECO:0000250|UniProtKB:Q96GD4}

Tissue Location

Expressed in testis, intestine and spleen. All of them are tissues that contain a large number of proliferating cells Expressed during S phase, in a cell-cycle-dependent fashion

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

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

- [Blocking Peptides](#)

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

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

Aurkb may be directly involved in regulating the cleavage of polar spindle microtubules and is a key regulator for the onset of cytokinesis during mitosis. Component of the chromosomal passenger complex (CPC), a complex that acts as a key regulator of mitosis. The CPC complex has essential functions at the centromere in ensuring correct chromosome alignment and segregation and is required for chromatin-induced microtubule stabilization and spindle assembly (By similarity). Phosphorylates 'Ser-10' and 'Ser-28' of histone H3 during mitosis. Required for kinetochore localization of BUB1 and SGOL1 (By similarity).