

Aurora B Antibody
Rabbit mAb
Catalog # AP90074

Specification

Aurora B Antibody - Product Information

Application	WB, IHC, ICC, IP
Primary Accession	O96GD4
Clonality	Monoclonal
Other Names	
AIK2; AIM1; ARK2; AURKB; Aurora- and Ipl1-like midbody-associated protein 1; Aurora-B; Aurora/IPL1-related kinase 2; STK-1; STK12;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	39311 Da

Aurora B Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Aurora B
Description	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.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Aurora B Antibody - 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 (PubMed:11516652, PubMed:12925766, PubMed:<a

[14610074](http://www.uniprot.org/citations/14610074), PubMed: [14722118](http://www.uniprot.org/citations/14722118), PubMed: [29449677](http://www.uniprot.org/citations/29449677)). 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 (PubMed: [11516652](http://www.uniprot.org/citations/11516652), PubMed: [12925766](http://www.uniprot.org/citations/12925766), PubMed: [14610074](http://www.uniprot.org/citations/14610074), PubMed: [14722118](http://www.uniprot.org/citations/14722118), PubMed: [26829474](http://www.uniprot.org/citations/26829474)). Involved in the bipolar attachment of spindle microtubules to kinetochores and is a key regulator for the onset of cytokinesis during mitosis (PubMed: [15249581](http://www.uniprot.org/citations/15249581)). Required for central/midzone spindle assembly and cleavage furrow formation (PubMed: [12458200](http://www.uniprot.org/citations/12458200), PubMed: [12686604](http://www.uniprot.org/citations/12686604)). 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 (PubMed: [22422861](http://www.uniprot.org/citations/22422861), PubMed: [24814515](http://www.uniprot.org/citations/24814515)). AURKB phosphorylates the CPC complex subunits BIRC5/survivin, CDCA8/borealin and INCENP (PubMed: [11516652](http://www.uniprot.org/citations/11516652), PubMed: [12925766](http://www.uniprot.org/citations/12925766), PubMed: [14610074](http://www.uniprot.org/citations/14610074)). Phosphorylation of INCENP leads to increased AURKB activity (PubMed: [11516652](http://www.uniprot.org/citations/11516652), PubMed: [12925766](http://www.uniprot.org/citations/12925766), PubMed: [14610074](http://www.uniprot.org/citations/14610074)). 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 (PubMed: [11756469](http://www.uniprot.org/citations/11756469), PubMed: [11784863](http://www.uniprot.org/citations/11784863), PubMed: [11856369](http://www.uniprot.org/citations/11856369), PubMed: [12689593](http://www.uniprot.org/citations/12689593), PubMed: [14602875](http://www.uniprot.org/citations/14602875), PubMed: [16103226](http://www.uniprot.org/citations/16103226), PubMed: [21658950](http://www.uniprot.org/citations/21658950)). A positive feedback loop involving HASPIN and AURKB contributes to localization of CPC to centromeres (PubMed: [21658950](http://www.uniprot.org/citations/21658950)). 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](http://www.uniprot.org/citations/11784863), PubMed: [11856369](http://www.uniprot.org/citations/11856369)). AURKB is also required for kinetochore localization of BUB1 and SGO1 (PubMed: [15020684](http://www.uniprot.org/citations/15020684), PubMed: [17617734](http://www.uniprot.org/citations/17617734)). Phosphorylation of p53/TP53 negatively regulates its transcriptional activity (PubMed: [20959462](http://www.uniprot.org/citations/20959462)). 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 (By similarity). 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 (PubMed: [33542149](http://www.uniprot.org/citations/33542149)

target="_blank">33542149). Phosphorylates KRT5 during anaphase and telophase (By similarity). Phosphorylates ATXN10 which promotes phosphorylation of ATXN10 by PLK1 and may play a role in the regulation of cytokinesis and stimulating the proteasomal degradation of ATXN10 (PubMed:25666058).

Cellular Location

Nucleus. Chromosome. Chromosome, centromere. Chromosome, centromere, kinetochore. Cytoplasm, cytoskeleton, spindle. Midbody. 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 (PubMed:20929775). Colocalized with gamma tubulin in the midbody (PubMed:17726514). Proper localization of the active, Thr-232- phosphorylated form during metaphase may be dependent upon interaction with SPDYC (PubMed:20605920). Colocalized with SIRT2 during cytokinesis with the midbody (PubMed:17726514). Localization (and probably targeting of the CPC) to the inner centromere occurs predominantly in regions with overlapping mitosis-specific histone phosphorylations H3pT3 and H2ApT12 (PubMed:20929775).

Tissue Location

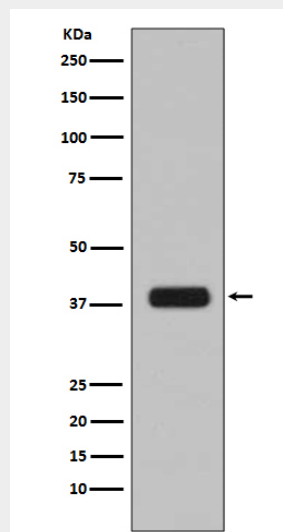
High level expression seen in the thymus. It is also expressed in the spleen, lung, testis, colon, placenta and fetal liver. Expressed during S and G2/M phase and expression is up-regulated in cancer cells during M phase.

Aurora B Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Aurora B Antibody - Images



Western blot analysis of Aurora B expression in HeLa cell lysate.