

# Aurora B Rabbit mAb

Catalog # AP75131

## Product Information

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<b>Application</b>	WB, IHC-P, FC, IP
<b>Primary Accession</b>	<a href="#">Q96GD4</a>
<b>Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Purification</b>	Affinity Purified
<b>Calculated MW</b>	39311

## Additional Information

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<b>Gene ID</b>	9212
<b>Other Names</b>	AURKB
<b>Dilution</b>	WB~~1:1000-1:5000 IHC-P~~N/A FC~~1:200-1:500 IP~~1:20
<b>Format</b>	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	AURKB
<b>Function</b>	Serine/threonine-protein kinase component of the chromosomal passenger complex (CPC), a complex that acts as a key regulator of mitosis (PubMed: <a href="#">11516652</a> , PubMed: <a href="#">12925766</a> , PubMed: <a href="#">14610074</a> , PubMed: <a href="#">14722118</a> , PubMed: <a href="#">29449677</a> ). 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: <a href="#">11516652</a> , PubMed: <a href="#">12925766</a> , PubMed: <a href="#">14610074</a> , PubMed: <a href="#">14722118</a> , PubMed: <a href="#">26829474</a> ). Involved in the bipolar attachment of spindle microtubules to kinetochores and is a key regulator for the onset of cytokinesis during mitosis (PubMed: <a href="#">15249581</a> ). Required for central/midzone spindle assembly and cleavage furrow formation (PubMed: <a href="#">12458200</a> , PubMed: <a href="#">12686604</a> ). 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](#), PubMed:[24814515](#)). AURKB phosphorylates the CPC complex subunits BIRC5/survivin, CDCA8/borealin and INCENP (PubMed:[11516652](#), PubMed:[12925766](#), PubMed:[14610074](#)). Phosphorylation of INCENP leads to increased AURKB activity (PubMed:[11516652](#), PubMed:[12925766](#), PubMed:[14610074](#)). Other known AURKB substrates involved in centromeric functions and mitosis are CENPA, DES/desmin, GPAF, KIF2C, NSUN2, RACGAP1, SEPTIN1, VIM/vimentin, HASPIN, and histones H1.4 and H3 (PubMed:[11756469](#), PubMed:[11784863](#), PubMed:[11856369](#), PubMed:[12689593](#), PubMed:[14602875](#), PubMed:[16103226](#), PubMed:[21511733](#), PubMed:[21658950](#)). A positive feedback loop involving HASPIN and AURKB contributes to localization of CPC to centromeres (PubMed:[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](#), PubMed:[11856369](#)). AURKB is also required for kinetochore localization of BUB1 and SGO1 (PubMed:[15020684](#), PubMed:[17617734](#)). Phosphorylation of p53/TP53 negatively regulates its transcriptional activity (PubMed:[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](#)). 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.

## Background

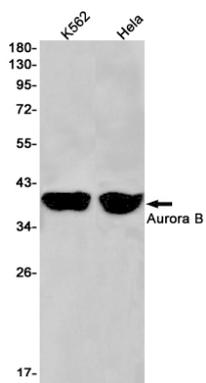
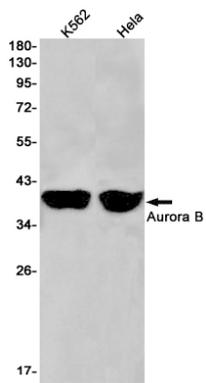
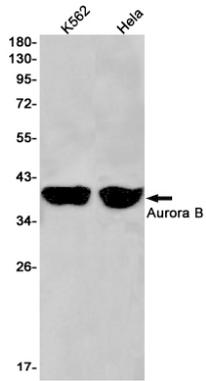
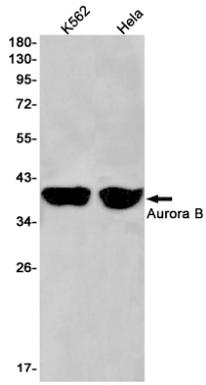
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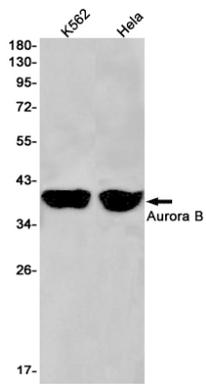
May be directly involved in regulating the cleavage of polar spindle microtubules and is a key regulator for the onset of cytokinesis during mitosis. Component of the chromosomal passenger complex (CPC), a complex that acts as a key regulator of mitosis. The CPC complex has essential functions at the centromere in ensuring correct chromosome alignment and segregation and is required for chromatin-induced microtubule stabilization and spindle assembly.

## Images

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Western blot analysis of Aurora B in K562, HeLa lysates using Aurora B antibody.





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