

Product datasheet

Anti-Aurora B antibody [EP1009Y] ab45145

Recombinant RabMAb

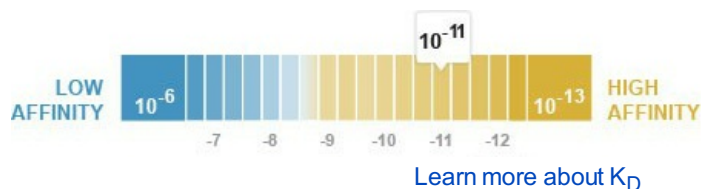
★★★★☆ 1 Abreviews 17 References 10 Images

Overview

<b>Product name</b>	Anti-Aurora B antibody [EP1009Y]
<b>Description</b>	Rabbit monoclonal [EP1009Y] to Aurora B
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, ICC/IF, IP <b>Unsuitable for:</b> Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide within Human Aurora B aa 1-100 (N terminal). The exact sequence is proprietary.
<b>General notes</b>	<p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>This product is a <a href="#">recombinant rabbit monoclonal antibody</a>.</p>

Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
<b>Dissociation constant (K<sub>D</sub>)</b>	K <sub>D</sub> = 5.50 x 10 <sup>-11</sup> M



<b>Storage buffer</b>	<p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 9% PBS, 40% Glycerol, 0.05% BSA, 50% Tissue culture supernatant</p>
<b>Purity</b>	Tissue culture supernatant
<b>Clonality</b>	Monoclonal

**Clone number** EP1009Y  
**Isotype** IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab45145** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆	1/50000. Predicted molecular weight: 39 kDa.
IHC-P		1/250 - 1/500.
ICC/IF		1/100 - 1/150.
IP		1/50.

**Application notes** Is unsuitable for Flow Cyt.

## Target

**Function** 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. Phosphorylates 'Ser-10' and 'Ser-28' of histone H3 during mitosis. Required for kinetochore localization of BUB1 and SGOL1. Interacts with INCENP.

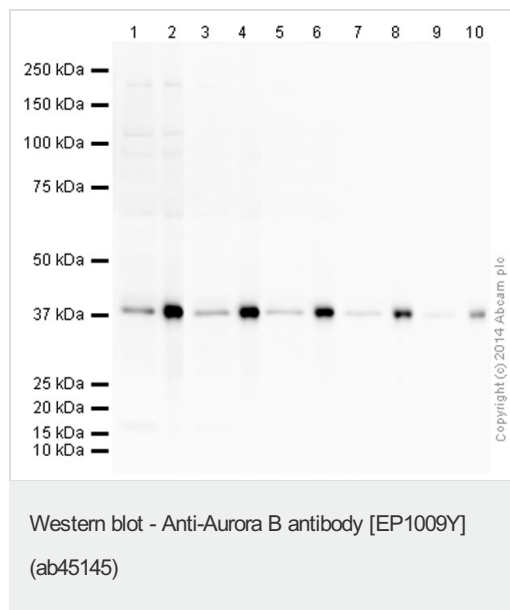
**Tissue specificity** High level expression seen in the thymus. It is also expressed in the spleen, lung, testis, colon, placenta and fetal liver. Expressed during S and G2/M phase and expression is up-regulated in cancer cells during M phase.

**Involvement in disease** Note=Disruptive regulation of expression is a possible mechanism of the perturbation of chromosomal integrity in cancer cells through its dominant-negative effect on cytokinesis.

**Sequence similarities** Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. Aurora subfamily. Contains 1 protein kinase domain.

**Post-translational modifications** Ubiquitinated by different BCR (BTB-CUL3-RBX1) E3 ubiquitin ligase complexes. Ubiquitinated by the BCR(KLHL9-KLHL13) E3 ubiquitin ligase complex, ubiquitination leads to removal from mitotic chromosomes and is required for cytokinesis. During anaphase, the BCR(KLHL21) E3 ubiquitin ligase complex recruits the CPC complex from chromosomes to the spindle midzone and mediates the ubiquitination of AURKB. Ubiquitination of AURKB by BCR(KLHL21) E3 ubiquitin ligase complex may not lead to its degradation by the proteasome.

**Cellular localization** Nucleus. Chromosome. Chromosome > centromere. Cytoplasm > cytoskeleton > spindle. 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 mid-body.



**Lanes 1-2 :** Anti-Aurora B antibody [EP1009Y] (ab45145) at 1/1000 dilution

**Lanes 3-4 :** Anti-Aurora B antibody [EP1009Y] (ab45145) at 1/5000 dilution

**Lanes 5-6 :** Anti-Aurora B antibody [EP1009Y] (ab45145) at 1/10000 dilution

**Lanes 7-8 :** Anti-Aurora B antibody [EP1009Y] (ab45145) at 1/50000 dilution

**Lanes 9-10 :** Anti-Aurora B antibody [EP1009Y] (ab45145) at 1/75000 dilution

**Lanes 1 & 3 & 5 & 7 & 9 :** HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

**Lanes 2 & 4 & 6 & 8 & 10 :** HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate Nocodazole Stimulated

Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes :** Anti-Rabbit IgG VHH Single Domain (HRP) (ab191866) at 1/10000 dilution

Developed using the ECL technique.

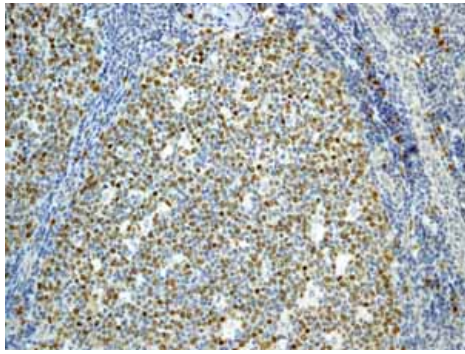
Performed under reducing conditions.

**Predicted band size:** 39 kDa

**Observed band size:** 39 kDa

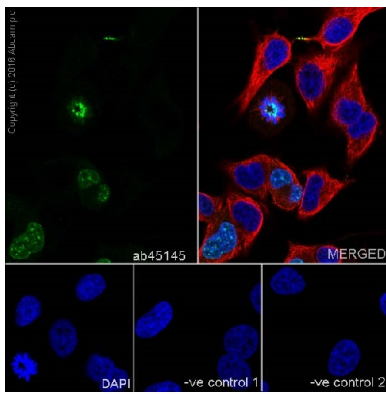
**Exposure time:** 8 minutes

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab45145 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution [ab133406](#)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aurora B antibody [EP1009Y] (ab45145)

ab45145 showing positive staining in Normal tonsil tissue.



Immunocytochemistry/ Immunofluorescence - Anti-Aurora B antibody [EP1009Y] (ab45145)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma cell line) cell lines labeling Aurora B with ab45145 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).

Confocal image showing midbody and centromeres staining on HeLa cells

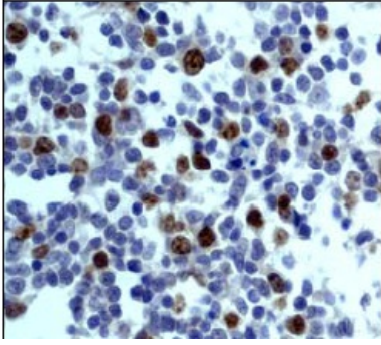
The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) preadsorbed (ab150120) at 1/1000 dilution (red).

The negative controls are as follows:-

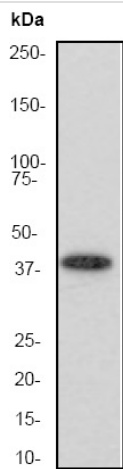
-ve control 1: ab45145 at 1/500 dilution followed by ab150120 at 1/1000 dilution.

-ve control 2: ab7291 at 1/1000 dilution followed by ab150077 at 1/1000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aurora B antibody [EP1009Y] (ab45145)

Ab45145 staining human Aurora B in human Hodgkin lymphoma by immunohistochemistry using paraffin embedded tissue.

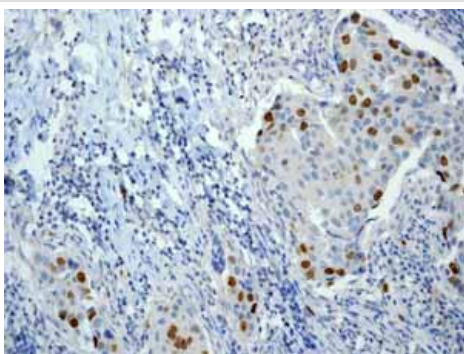


Western blot - Anti-Aurora B antibody [EP1009Y] (ab45145)

Anti-Aurora B antibody [EP1009Y] (ab45145) at 1/50000 dilution + HeLa cell lysate

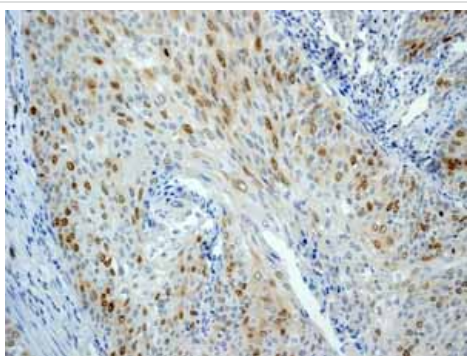
**Predicted band size:** 39 kDa

**Observed band size:** 39 kDa



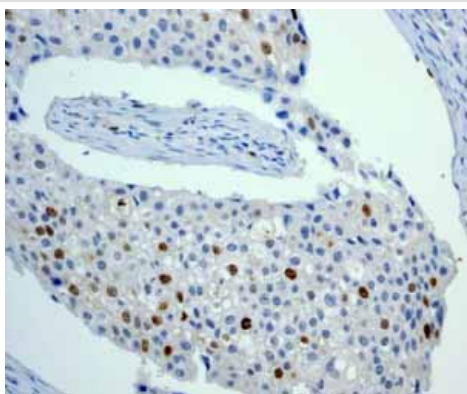
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aurora B antibody [EP1009Y] (ab45145)

ab45145 showing positive staining in Breast carcinoma tissue.



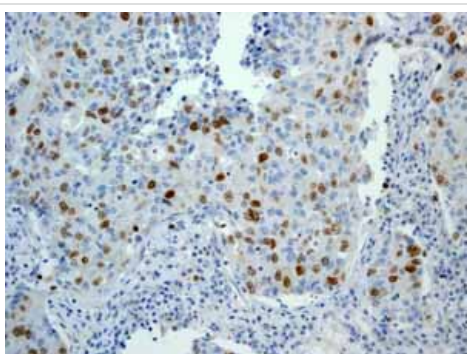
ab45145 showing positive staining in Cervical carcinoma tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aurora B antibody [EP1009Y] (ab45145)



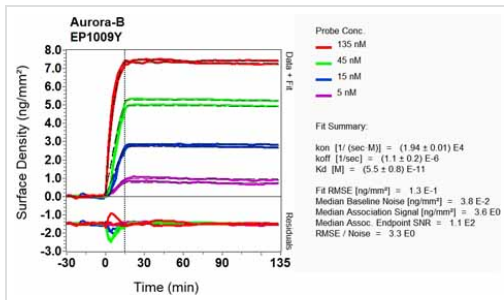
ab45145 showing positive staining in Urinary bladder transitional carcinoma tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aurora B antibody [EP1009Y] (ab45145)



ab45145 showing positive staining in Lung adenocarcinoma tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aurora B antibody [EP1009Y] (ab45145)



Other - Anti-Aurora B antibody [EP1009Y] (ab45145)

Equilibrium disassociation constant ( $K_D$ )

Learn more about  $K_D$

[Click here to learn more about  \$K\_D\$](#)

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