

# Product Datasheet

## Aurora B Antibody - BSA Free NB100-294

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Updated 9/9/2025 v.20.1

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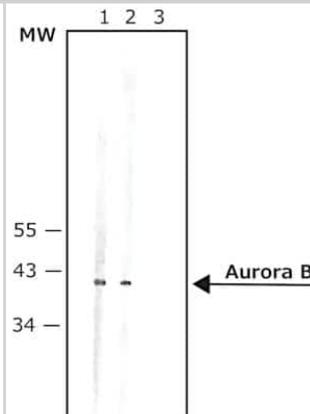
**NB100-294**

Aurora B Antibody - BSA Free

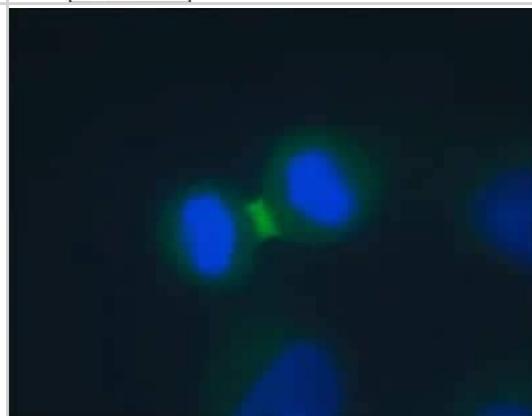
Product Information	
Unit Size	0.1 ml
Concentration	12.5 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.09% Sodium Azide
Isotype	IgG
Purity	IgG purified
Buffer	10mM PBS (pH 7.4)
Target Molecular Weight	41 kDa
Product Description	
Description	Novus Biologicals Rabbit Aurora B Antibody - BSA Free (NB100-294) is a polyclonal antibody validated for use in IHC, WB, ICC/IF and IP. Anti-Aurora B Antibody: Cited in 12 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	9212
Gene Symbol	AURKB
Species	Human, Mouse, Rat
Marker	Mitosis Marker
Specificity/Sensitivity	Aurora B
Immunogen	Synthetic peptide corresponding to amino acids 1-19 of human Aurora B with C-terminal added cysteine conjugated to KLH. Uniprot accession no. Q96GD4
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunoprecipitation, Microarray
Recommended Dilutions	Western Blot 1:1000-1:2000, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:50, Immunoprecipitation 50-60 ug, Immunohistochemistry-Paraffin 1:10-1:500, Microarray
Application Notes	By Western blot, it detects a band of approximately 41 kDa. Detection of the Aurora B band by immunoblotting is specifically inhibited with the immunizing peptide.

## Images

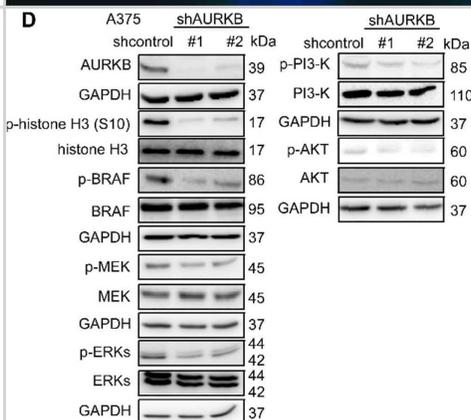
Western Blot: Aurora B Antibody - BSA Free [NB100-294] - Whole extract of PC-12 cells were separated on SDS-PAGE and probed with Anti-Aurora B antibody produced in Rabbit. The antibody was developed using 1:10,000 Anti-Rabbit IgG (whole molecule)-Peroxidase antibody produced in Goat. Lanes: 1. 1:1000 antibody 2. 1:2000 antibody 3. Negative Control



Immunocytochemistry/Immunofluorescence: Aurora B Antibody - BSA Free [NB100-294] - HeLa human cervix epitheloid carcinoma cells were fixed and permeabilized with 4% paraformaldehyde followed by cold methanol. Fixed cells were stained with 1:50 Anti-Aurora B antibody produced in rabbit. The antibody was developed using Anti-Rabbit IgG (whole molecule)-FITC antibody produced in goat.



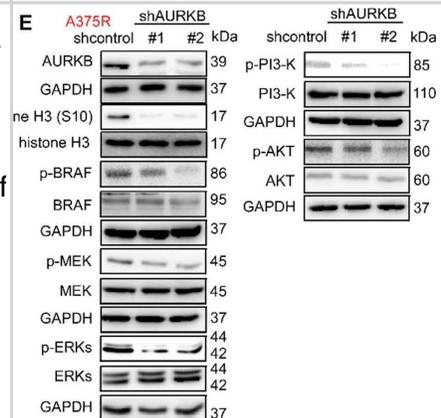
AURKB mediates EGF associated BRAF/MEK/ERKs and PI3-K/AKT pathways. (A, B) Knocking down of AURKB suppressed the level of EGF in A375 and A375R tumor from xenograft mice compared with shcontrol. The asterisks indicate a significant difference compared with the shcontrol group (\*,  $p < 0.05$ ; \*\*,  $p < 0.01$ ). (C) Knocking down of AURKB increased levels of c-PARP, c-caspase 3, and decreased of Bcl-2 level of A375 and A375R cell lines. (D, E) Western blot analysis of activation of BRAF/MEK/ERKs and PI3-K/AKT by knocking down of AURKB in A375 and A375R cell lines. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/32863956>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



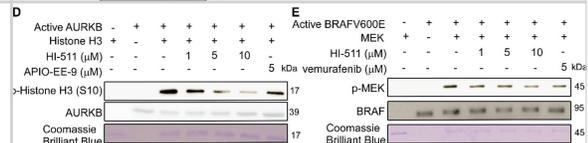
Database analysis and AURKB expression level in melanoma. (A) Volcano plot of gene expression analysis in GSE 4587. The X-axis indicates the fold change between normal skin or nevi and melanoma samples, and the Y-axis indicates on a log10 scale the p-values obtained from a supervised logistic regression analysis testing the association of gene expression between normal skin or nevi/melanoma. The horizontal dotted lines mark the significance cutoffs (i.e., fold change more than 4 times or less than 0.25, and p-value less than 0.001). (B) Heat map of analysis of the expression of these selected genes in GSE 4587. AURKB has a higher expression level in melanoma compared with non-melanoma (normal skin and nevi). (C) Pathway enrichment analysis of differential gene analysis. The top 2 pathways were selected, fold change more than 4 times, p-value less than 0.0001. (D) The Venn diagram lists the common genes in both pathways. (E) Melanoma patients with high expression of AURKB show a significantly lower overall survival rate. (F) AURKB is highly expressed in melanoma compared with normal skin as determined by GEPIA. (G) AURKB is significantly overexpressed in melanoma tissue compared with normal skin as shown in a tissue array analysis; the scale bar = 100  $\mu$ m. (H) AURKB is overexpressed in drug-resistant melanoma cell lines (A375R, M238R, and M249R) compared with drug-sensitive melanoma cell lines (A375, M238 and M249). Statistical significance was determined by Student's t-test and the asterisks indicate a significant change compared with the control group (\*,  $p < 0.05$ ; \*\*\*,  $p < 0.001$ ). Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/32863956>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



AURKB mediates EGF associated BRAF/MEK/ERKs and PI3-K/AKT pathways. (A, B) Knocking down of AURKB suppressed the level of EGF in A375 and A375R tumor from xenograft mice compared with shcontrol. The asterisks indicate a significant difference compared with the shcontrol group (\*,  $p < 0.05$ ; \*\*  $p < 0.01$ ). (C) Knocking down of AURKB increased levels of c-PARP, c-caspase 3, and decreased of Bcl-2 level of A375 and A375R cell lines. (D, E) Western blot analysis of activation of BRAF/MEK/ERKs and PI3-K/AKT by knocking down of AURKB in A375 and A375R cell lines. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/32863956>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



HI-511 binds to and effectively suppresses the activation of AURKB and BRAF V600E. (A) The structure of HI-511. (B) Computer docking model of HI-511 binding with AURKB. (C) Computer docking model of HI-511 binding with BRAF V600E. (D) HI-511 inhibits AURKB in vitro. Active kinase AURKB and HI-511 (0, 1, 5 and 10  $\mu$ M) or APIO-EE-9 (5  $\mu$ M) were mixed with the substrate histone H3. The relative amounts of phosphorylated substrate were visualized by Western blot. (E) HI-511 inhibits BRAF V600E in vitro. Active kinase BRAF V600E and HI-511 (0, 1, 5, 10  $\mu$ M) or vemurafenib (5  $\mu$ M) were mixed with the substrate phosphatidylinositol. The relative amounts of phosphorylated substrate were visualized by Western blot. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/32863956>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Chen Y, Wang L, Zhou Q et al. Dynamic R-loops at centromeres ensure chromosome alignment during oocyte meiotic divisions in mice. *Science Bulletin* 2025-02-13 [PMID: 39984387]

Jana S, Brahma S, Arora S, Wladyka CL et Al. Transcriptional-translational conflict is a barrier to cellular transformation and cancer progression *Cancer Cell* 2023-04-21 [PMID: 37084735]

Carlotta Penzo, Laura Arnoldo, Silvia Pegoraro, Sara Petrosino, Gloria Ros, Rossella Zanin, Jacek R. Wiśniewski, Guidalberto Manfioletti, Riccardo Sgarra HMGA1 Modulates Gene Transcription Sustaining a Tumor Signalling Pathway Acting on the Epigenetic Status of Triple-Negative Breast Cancer Cells *Cancers* 2019-08-02 [PMID: 31382504]

Chang X Hi-511 Inhibits Both BRAF and AURKB to Overcome Malignant Melanoma Drug Resistance and Metastasis Thesis 2020-01-01

Chang X, Zhang T, Wang Q et al. HI-511 overcomes melanoma drug resistance via targeting AURKB and BRAF V600E Theranostics 2020-08-01 [PMID: 32863956] (Human)

Fang H, Niu K, Mo D et al. RecQL4-Aurora B kinase axis is essential for cellular proliferation, cell cycle progression, and mitotic integrity. *Oncogenesis* 2018-09-12 [PMID: 30206236] (ICC/IF, Human)

Dumitru AMG, Rusin SF, Clark AEM et al. Cyclin A/Cdk1 modulates Plk1 activity in prometaphase to regulate kinetochore-microtubule attachment stability *Elife*. 2017-11-20 [PMID: 29154753] (ICC/IF, WB, Human)

### Details:

HEC1 IF antibody used at a dilution of 1:500

Sijare F, Geibler AL, Fichter CD et al. Aurora B expression and histone variant H1.4S27 phosphorylation are no longer coordinated during metaphase in aneuploid colorectal carcinomas *Virchows Arch*. 2015-02-14 [PMID: 25680570] (ICC/IF)

Kleyman M, Kabeche L, Compton DA. STAG2 promotes error correction in mitosis by regulating kinetochore-microtubule attachments. *J. Cell. Sci.* 2014-07-29 [PMID: 25074805] (ICC/IF, Human)

### Details:

Outer kinetochore component Hec1/NDC80 antibody used in ICC-IF on HCT116 and RPE1 cells for measuring centromere stretch (Fig. 1D, supplementary material Fig. S2A)

Kabeche L, Compton DA. Cyclin A regulates kinetochore microtubules to promote faithful chromosome segregation. *Nature*. 2013-10-03 [PMID: 24013174] (ICC/IF, Human)

Kabeche L, Compton DA. Checkpoint-independent stabilization of kinetochore-microtubule attachments by Mad2 in human cells. *Curr Biol* 2012-04-01 [PMID: 22405866] (ICC/IF, Human)

Lee EC, Frolov A, Li R et al. Targeting Aurora kinases for the treatment of prostate cancer. *Cancer Res* 2006-05-01 [PMID: 16707419]

More publications at <http://www.novusbio.com/NB100-294>



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### **Products Related to NB100-294**

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NBL1-07860	Aurora B Overexpression Lysate
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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