

Anti-Aurora A/AURKA Antibody Picoband®

Catalog Number: A00246-3

About AURKA

AURKA (aurora kinase A), also called ARK1, AurA, AIK, AURORA2, BTAK, PPP1R47, STK7, STK15, STK6, is a mitotic centrosomal protein kinase. The main role of AURKA in tumor development is in controlling chromosome segregation during mitosis. Aurora A is a member of a family of mitotic serine/threonine kinases. Cell cycle and Northern blot analyses showed that peak expression of AURKA occurs during the G2/M phase and then decreases. By fluorescence in situ hybridization, AURKA gene is represented by 2 signals in chromosome bands 20q13.2-q13.3 and 1q41-q42. The AURKA gene is overexpressed in many human cancers. Ectopic overexpression of Aurora kinase A in mammalian cells induces centrosome amplification, chromosome instability, and oncogenic transformation, a phenotype characteristic of loss-of-function mutations of p53. Depletion of Ajuba prevented activation of AURKA at centrosomes in late G2 phase and inhibited mitotic entry. Activation of AURKA was independently sufficient to induce rapid ciliary resorption, and AURKA acted in this process through phosphorylation of HDAC6, leading to HDAC6-dependent tubulin deacetylation and destabilization of the ciliary axoneme. Small molecule inhibitors of AURKA and HDAC6 reduced regulated disassembly of cilia.

Overview

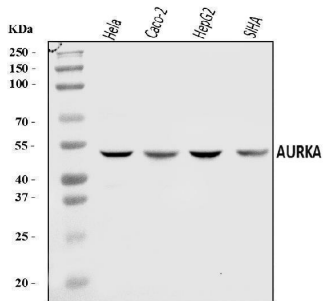
Product Name	Anti-Aurora A/AURKA Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-Aurora A/AURKA Antibody Picoband® catalog # A00246-3. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	O14965

Technical Details

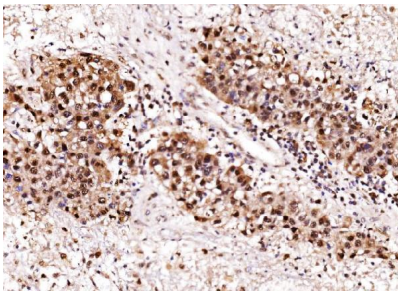
Immunogen	E.coli-derived human Aurora A/AURKA recombinant protein (Position: M1-K97).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.

Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.25 ug/ml, Human Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5 ug/ml, -

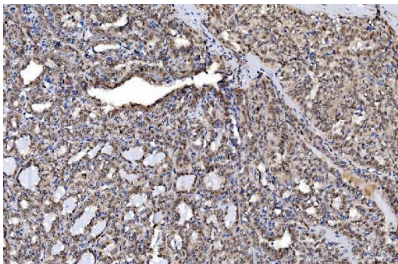
Anti-Aurora A/AURKA Antibody Picoband® (A00246-3) Images



Western blot analysis of Aurora A/AURKA using anti-Aurora A/AURKA antibody (A00246-3). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human HeLa whole cell lysates, Lane 2: human Caco-2 whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: human SiHa whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Aurora A/AURKA antigen affinity purified polyclonal antibody (Catalog # A00246-3) at 0.25 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Aurora A/AURKA at approximately 50 kDa. The expected band size for Aurora A/AURKA is at 50 kDa.

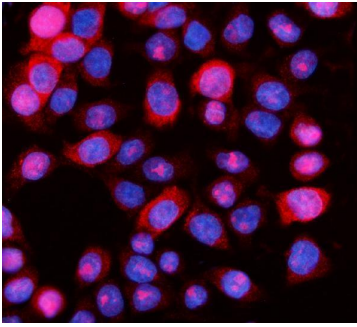


IHC analysis of Aurora A/AURKA using anti-Aurora A/AURKA antibody (A00246-3). Aurora A/AURKA was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Aurora A/AURKA Antibody (A00246-3) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

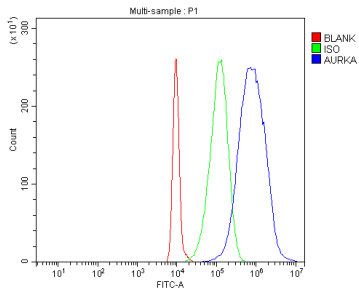


IHC analysis of Aurora A/AURKA using anti-Aurora A/AURKA antibody (A00246-3). Aurora A/AURKA was detected in a paraffin-embedded section of human Hashimoto thyroiditis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Aurora A/AURKA Antibody (A00246-3) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

IF analysis of Aurora A/AURKA using anti-Aurora A/AURKA antibody (A00246-3). Aurora A/AURKA was detected in an immunocytochemical section of Caco-2 cells. Enzyme



antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-Aurora A/AURKA Antibody (A00246-3) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of HL-60 cells using anti-Aurora A/AURKA antibody (A00246-3). Overlay histogram showing HL-60 cells stained with A00246-3 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Aurora A/AURKA Antibody (A00246-3, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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Anti-Aurora A/AURKA Antibody

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