

Rabbit anti-Human, Mouse AURKA Polyclonal Antibody | anti-AURKA antibody

AURKA Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326604	Rabbit	Human, Mouse	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

AURKA; Polyclonal Antibody; AURKA Antibody; AIK; ARK-1; ARK1; AURA; Aurka; Aurora 2; Aurora A; Aurora kinase A; Aurora-related kinase 1; Aurora/IPL1 like kinase; Aurora/IPL1-related kinase 1; AURORA2; Breast tumor-amplified kinase; BTAK; hARK1; IAK; IPL1 related kinase; MGC34538; OTTHUMP00000031340; OTTHUMP00000031341; OTTHUMP00000031342; OTTHUMP00000031343; OTTHUMP00000031344; OTTHUMP00000031345; OTTHUMP00000166071; OTTHUMP00000166072; PPP1R47; Protein phosphatase 1; regulatory subunit 47; Serine/threonine kinase 15; Serine/threonine kinase 6; Serine/threonine-protein kinase 15; Serine/threonine-protein kinase 6; Serine/threonine-protein kinase aurora-A; STK15; STK6; STK6_HUMAN; STK7; anti-AURKA antibody

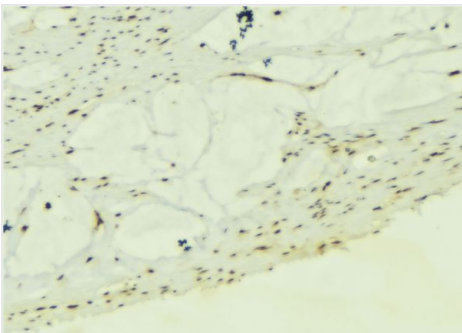
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Isotype	IgG
Specificity	AURKA antibody detects endogenous levels of total AURKA
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	403
Applicable Applications for anti-AURKA antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthetic peptide of human AURKA
Subcellular Location	Cytoplasm > Cytoskeleton > Centrosome. Cytoplasm > Cytoskeleton > Spindle Pole. Detected at the neurite hillock in developing neurons (By similarity). Localizes on centrosomes in interphase cells and at each spindle pole in mitosis.
Tissue Specificity	Highly expressed in testis and weakly in skeletal muscle, thymus and spleen. Also highly expressed in colon, ovarian, prostate, neuroblastoma, breast and cervical cancer cell lines.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



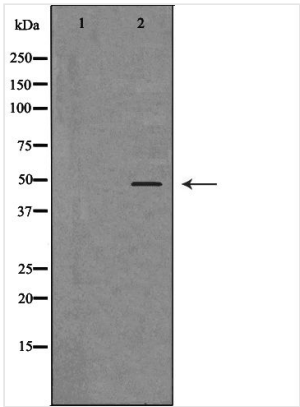
IF (Immunofluorescence)

AAA326604 staining 293 cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.



IHC (Immunohistochemistry)

AAA326604 at 1/100 staining Mouse muscle tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)

Western blot analysis of Jurkat whole cell lysates, using AURKA Antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-AURKA antibody	Description: Aurora A (AIK) is a cell cycle-regulated Ser/Thr protein kinase that is overexpressed in many tumor cell lines (1-3). Phosphorylation of Aurora A at Thr288 within the kinase activation loop results in a significant increase in its activity and may target the protein for proteasomal degradation during mitosis (4). The closely-related kinase Aurora B (AIM1) has been implicated in multiple mitotic events (5), and siRNA silencing of Aurora B expression results in reduced histone H3 phosphorylation, aberrant chromosome alignment/segregation, and altered survivin localization (6). Function: Mitotic serine/threonine kinase that contributes to the regulation of cell cycle progression. Associates with the centrosome and the spindle microtubules during mitosis and plays a critical role in various mitotic events including the establishment of mitotic spindle, centrosome duplication, centrosome separation as well as maturation, chromosomal alignment, spindle assembly checkpoint, and cytokinesis. Required for initial activation of CDK1 at centrosomes. Phosphorylates numerous target proteins, including ARHGEF2, BORA, BRCA1, CDC25B, DLGP5, HDAC6, KIF2A, LATS2, NDEL1, PARD3, PPP1R2, PLK1, RASSF1, TACC3, p53/TP53 and TPX2. Regulates KIF2A tubulin depolymerase activity. Required for normal axon formation. Plays a role in microtubule remodeling during neurite extension. Important for microtubule formation and/or stabilization. Also acts as a key regulatory component of the p53/TP53 pathway, and particularly the checkpoint-response pathways critical for oncogenic transformation of cells, by phosphorylating and stabilizing p53/TP53. Phosphorylates its own inhibitors, the protein phosphatase type 1 (PP1) isoforms, to inhibit their activity. Necessary for proper cilia disassembly prior to mitosis. Subunit Structure: Interacts with FBXL7 (By similarity). Interacts with CPEB1, JTB, TACC1, TPX2, PPP2CA, as well as with the protein phosphatase type 1 (PP1) isoforms PPP1CA, PPP1CB and PPP1CC. Interacts also with its substrates ARHGEF2, BORA, BRCA1, KIF2A, PARD3, and p53/TP53. Interaction with BORA promotes phosphorylation of PLK1. Interacts with PIFO. Interacts with GADD45A, competing with its oligomerization. Interacts (via C-terminus) with AUNIP (via C-terminus). Identified in a complex with AUNIP and NIN. Interacts with FRY; this interaction facilitates AURKA-mediated PLK1 phosphorylation. Interacts with SIRT2. Interacts with MYCN; interaction is phospho-independent and triggers AURKA activation; AURKA competes with FBXW7 for binding to unphosphorylated MYCN but not for binding to phosphorylated MYCN (PubMed:27837025). Interacts with HNRNPU (PubMed:21242313, PubMed:25986610). Post-translational Modifications: Activated by phosphorylation at Thr-288; this brings about a change in the conformation of the activation segment. Phosphorylation at Thr-288 varies during the cell cycle and is highest during M phase. Autophosphorylated at Thr-288 upon TPX2 binding. Thr-288 can be phosphorylated by several kinases, including PAK and PKA. Protein phosphatase type 1 (PP1) binds AURKA and inhibits its activity by dephosphorylating Thr-288 during mitosis. Phosphorylation at Ser-342 decreases the kinase activity. PPP2CA controls degradation by dephosphorylating Ser-51 at the end of mitosis. Ubiquitinated by the E3 ubiquitin-protein ligase complex SCF(FBXL7) during mitosis, leading to its degradation by the proteasome. Ubiquitinated by CHFR, leading to its degradation by the proteasome (By similarity). Ubiquitinated by the anaphase-promoting complex (APC), leading to its degradation by the proteasome. Similarity: Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. Aurora subfamily.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	1020158885
NCBI GeneID	6790
NCBI Accession #	NP_001310232.1
NCBI GenBank Nucleotide #	NM_001323303.1
UniProt Accession #	O14965; O60445; O75873; Q9BQD6; Q9UPG5; E1P5F9
Molecular Weight	Observed: 46 kDa Predicted: 46 kDa
NCBI Official Full Name	aurora kinase A
NCBI Official Synonym Full Names	aurora kinase A
NCBI Official Symbol	AURKA
NCBI Official Synonym Symbols	AIK; ARK1; AURA; BTAK; STK6; STK7; STK15; PPP1R47
NCBI Protein Information	aurora kinase A
UniProt Protein Name	Aurora kinase A

UniProt Gene Name	AURKA
UniProt Synonym Gene Names	AIK; AIRK1; ARK1; AURA; AYK1; BTAK; IAK1; STK15; STK6; ARK-1; Aurora-related kinase 1; hARK1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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