Rabbit AurB Polyclonal Antibody | anti-AURKB antibody

AurB Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA322012	**Rabbit**	**Human, Mouse, Rat, Monkey**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

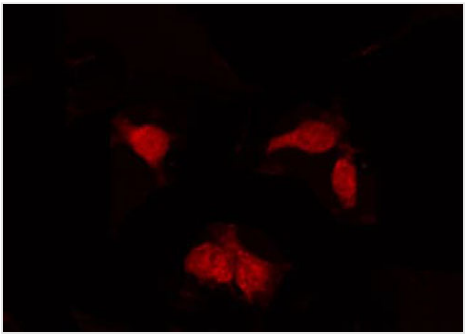
PRODUCT SYNONYMS

AurB; Polyclonal Antibody; AurB Antibody; AIK2; AIM-1; AIM1; ARK-2; ARK2; AURKB; AURKB_HUMAN; Aurora 1; Aurora and Ipl1 like midbody associated protein 1; Aurora kinase B; Aurora related kinase 2; Aurora-and Ipl1-like midbody-associated protein 1; Aurora-B; Aurora-related kinase 2; Aurora/IPL1 related kinase 2; Aurora/IPL1-related kinase 2; IPL1; PPP1R48; Protein phosphatase 1 regulatory subunit 48; Serine/theronine kinase 12; Serine/threonine protein kinase 12; Serine/threonine-protein kinase 12; Serine/threonine-protein kinase aurora-B; STK-1; STK1; STK12; STK5; anti-AURKB antibody

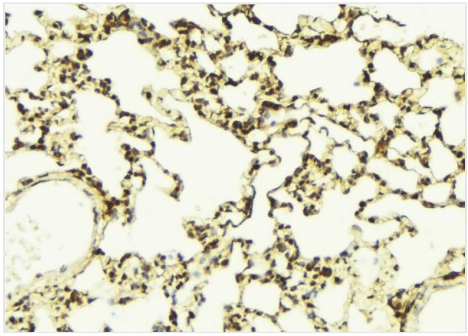
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat, Monkey
Clonality	Polyclonal
Isotype	IgG
Specificity	AurB antibody detects endogenous levels of total AurB
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	303
Applicable Applications for anti-AURKB antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human AurB
Subcellular Location	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.
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.
Predicted Cross Reactivity	**Pig, Bovine, Horse, Sheep, Dog**
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Dog (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

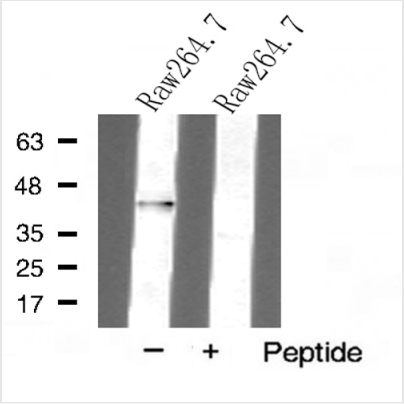
IMAGES



IF (Immunofluorescence)
AAA322012 staining COS7 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) Ab, diluted at 1/600, was used as the secondary antibody.



IHC (Immunohiostchemistry)
AAA322012 at 1/100 staining Mouse lung 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 AurB expression in Raw264.7 cells

ADDITIONAL INFORMATION

Related Product Information for anti-AURKB antibody	Function: Serine/threonine-protein kinase 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. Involved in the bipolar attachment of spindle microtubules to kinetochores and is a key regulator for the onset of cytokinesis during mitosis. Required for central/midzone spindle assembly and cleavage furrow formation. 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. Phosphorylation of INCENP leads to increased AURKB activity. Other known AURKB substrates involved in centromeric functions and mitosis are CENPA, DES/desmin, GPAF, KIF2C, NSUN2, RACGAP1, SEPT1, VIM/vimentin, HASPIN, and histone H3. A positive feedback loop involving HASPIN and AURKB contributes to localization of CPC to centromeres. 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). A positive feedback between HASPIN and AURKB contributes to CPC localization. AURKB is also required for kinetochore localization of BUB1 and SGO1. Phosphorylation of p53/TP53 negatively regulates its transcriptional activity. 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. Subunit Structure: Component of the chromosomal passenger complex (CPC) composed of at least BIRC5/survivin, CDCA8/borealin, INCENP, AURKB or AURKC; predominantly independent AURKB-and AURKC-containing complexes exist. Associates with RACGAP1 during M phase. Interacts with CDCA1, EVI5, JTB, NDC80, PSMA3, SEPT1, SIRT2 and TACC1. Interacts with SPDYC; this interaction may be required for proper localization of active, Thr-232-phosphorylated AURKB form during prometaphase and metaphase. Interacts with p53/TP53. Interacts (via the middle kinase domain) with NOC2L (via the N-and C-terminus domains). Interacts with TTC28. Interacts with RNF2/RING1B. Post-translational Modifications: The phosphorylation of Thr-232 requires the binding to INCENP and occurs by means of an autophosphorylation mechanism. Thr-232 phosphorylation is indispensable for the AURKB kinase activity. 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. Similarity: Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. Aurora subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	378786658
NCBI GeneID	9212
NCBI Accession #	NP_001243763.1
NCBI GenBank Nucleotide #	NM_001256834.2
UniProt Accession #	Q96GD4; O14630; O60446; O95083; Q96DV5; Q9UQ46; B4DNM4; C7G533; C7G534; C7G535; D3DTR4; J9JID1
Molecular Weight	Observed: 40 kDa Predicted: 40 kDa
NCBI Official Full Name	aurora kinase B isoform 2
NCBI Official Synonym Full Names	aurora kinase B
NCBI Official Symbol	AURKB
NCBI Official Synonym Symbols	AIK2; AIM1; ARK2; AurB; IPL1; STK5; AIM-1; ARK-2; STK-1; STK12; PPP1R48; aurkb-sv1; aurkb-sv2
NCBI Protein Information	aurora kinase B
UniProt Protein Name	Aurora kinase B
UniProt Gene Name	**AURKB**

UniProt Synonym Gene Names	AIK2; AIM1; AIRK2; ARK2; STK1; STK12; STK5; AIM-1; ARK-2; Aurora-related kinase 2

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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