

Anti-Aurora B pT232 (RABBIT) Antibody
AURORA KINASE B phospho T232 Antibody
Catalog # ASR5269

Specification

Anti-Aurora B pT232 (RABBIT) Antibody - Product Information

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human, Monkey
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	Phospho pT232 Aurora B antibody has been tested for use in ELISA, immunohistochemistry, and by western blot. See below for specific protocol. Expect a band approximately 39 kDa in size corresponding to Aurora Kinase B by western blotting in the appropriate cell lysate or extract. HeLa cell lysate can be used as a positive control.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region surrounding T232 of Human Aurora Kinase B protein.
Preservative	0.01% (w/v) Sodium Azide

Anti-Aurora B pT232 (RABBIT) Antibody - Additional Information

Gene ID 9212

Other Names 9212

Purity

Anti-Phospho Aurora B pT232 affinity purified antibody is directed against the phosphorylated form of human Aurora Kinase B at the pT232 residue. The product was affinity purified from monospecific antiserum by immunoaffinity purification. Antiserum was first purified against the phosphorylated form of the immunizing peptide. The resultant affinity purified antibody was then cross-adsorbed against the non-phosphorylated form of the immunizing peptide. Reactivity occurs against human Aurora Kinase B pT232 protein and the antibody is specific for the phosphorylated form of the protein. Reactivity with non-phosphorylated human Aurora Kinase B is minimal by ELISA. No reaction is expected against Aurora Kinase A. However, 100% sequence homology as indicated by BLAST analysis is on record for this protein from human, mouse, rat, cow, pig, dog and chimpanzee. Cross reactivity with Aurora Kinase B from other sources is not known.

Storage Condition

Store Phospho Specific Antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Aurora B pT232 (RABBIT) Antibody - Protein Information

Name AURKB

Function

Serine/threonine-protein kinase component of the chromosomal passenger complex (CPC), a complex that acts as a key regulator of mitosis (PubMed:11516652, PubMed:12925766, PubMed:14610074, PubMed:14722118, PubMed:29449677). 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 (PubMed:11516652, PubMed:12925766, PubMed:14610074, PubMed:14722118, PubMed:26829474). Involved in the bipolar attachment of spindle microtubules to kinetochores and is a key regulator for the onset of cytokinesis during mitosis (PubMed:15249581). Required for central/midzone spindle assembly and cleavage furrow formation (PubMed:12458200, PubMed:12686604). 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 (PubMed:11516652, PubMed:12925766, PubMed:14610074). Phosphorylation of INCENP leads to increased AURKB activity (PubMed:11516652, PubMed:12925766, PubMed:14610074). Other known AURKB substrates involved in centromeric functions and mitosis are CENPA, DES/desmin, GPAF, KIF2C, NSUN2, RACGAP1, SEPTIN1, VIM/vimentin, HASPIN, and histones H1.4 and H3 (PubMed:11756469, PubMed:11784863, PubMed:11856369, PubMed:12689593, PubMed:14602875, PubMed:15249581).

href="http://www.uniprot.org/citations/16103226" target="_blank">>16103226, PubMed:>21511733, PubMed:>21658950). A positive feedback loop involving HASPIN and AURKB contributes to localization of CPC to centromeres (PubMed:>21658950). 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) (PubMed:>11784863, PubMed:>11856369). AURKB is also required for kinetochore localization of BUB1 and SGO1 (PubMed:>15020684, PubMed:>17617734). Phosphorylation of p53/TP53 negatively regulates its transcriptional activity (PubMed:>20959462). 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 (By similarity). Acts as an inhibitor of CGAS during mitosis: catalyzes phosphorylation of the N-terminus of CGAS during the G2-M transition, blocking CGAS liquid phase separation and activation, and thereby preventing CGAS-induced autoimmunity (PubMed:>33542149). Phosphorylates KRT5 during anaphase and telophase (By similarity). Phosphorylates ATXN10 which promotes phosphorylation of ATXN10 by PLK1 and may play a role in the regulation of cytokinesis and stimulating the proteasomal degradation of ATXN10 (PubMed:>25666058).

Cellular Location

Nucleus. Chromosome. Chromosome, centromere. Chromosome, centromere, kinetochore. Cytoplasm, cytoskeleton, spindle. Midbody. Note=Localizes on chromosome arms and inner centromeres from prophase through metaphase and then transferring to the spindle midzone and midbody from anaphase through cytokinesis (PubMed:20929775). Colocalized with gamma tubulin in the midbody (PubMed:17726514). Proper localization of the active, Thr-232- phosphorylated form during metaphase may be dependent upon interaction with SPDYC (PubMed:20605920). Colocalized with SIRT2 during cytokinesis with the midbody (PubMed:17726514). Localization (and probably targeting of the CPC) to the inner centromere occurs predominantly in regions with overlapping mitosis-specific histone phosphorylations H3pT3 and H2ApT12 (PubMed:20929775).

Tissue Location

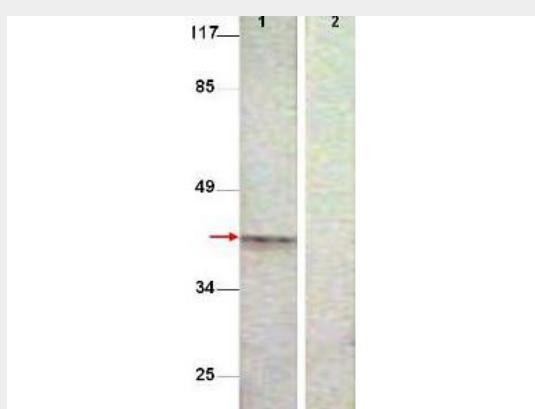
High level expression seen in the thymus. It is also expressed in the spleen, lung, testis, colon, placenta and fetal liver. Expressed during S and G2/M phase and expression is up-regulated in cancer cells during M phase.

Anti-Aurora B pT232 (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Aurora B pT232 (RABBIT) Antibody - Images



Western Blot shows detection of Aurora B protein at 39 kDa (predicted band size). All lanes : Aurora B (phospho T232) antibody diluted 1:500. Lane 1 : Extract from COS7 cells treated with Nocodazole (1ug/ml, 16 hrs). Lane 2 : Extract from COS7 cells treated with Nocodazole (1ug/ml, 16 hrs) and with the phosphopeptide immunogen.

Anti-Aurora B pT232 (RABBIT) Antibody - Background

Aurora Kinase B (Aurora-B) is a Ser/Thr protein kinase member of the Aurora subfamily that may be directly involved in regulating the cleavage of polar spindle microtubules and is a key regulator for the onset of cytokinesis during mitosis. Aurora Kinase B is localized to the midzone of central spindle in late anaphase and concentrated into the midbody in telophase and cytokinesis and is colocalized with gamma tubulin in the mid-body. High levels of Aurora B expression are seen in the thymus, although it is also expressed in the spleen, lung, testis, colon, placenta and fetal liver. Aurora B is expressed during S and G2/M phase and expression is up-regulated in cancer cells during M phase. Anti-AURORA B pT232 Antibody is useful for researchers interested in gene expression, DNA damage, cytokinesis, and transcription activities.