

Product datasheet

Anti-Aurora A antibody - Centrosome Marker ab12875

★★★★☆ 5 Abreviews 6 References 3 Images

Overview

Product name	Anti-Aurora A antibody - Centrosome Marker
Description	Rabbit polyclonal to Aurora A - Centrosome Marker
Host species	Rabbit
Specificity	ab12875 detects a single clean band of just below 50kD in Jurkat and Hela cell lysates. This band corresponds to the size of Aurora A seen using other antibodies.
Tested applications	Suitable for: IHC-P, WB, ICC/IF, ICC
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 50 - 150 of Human Aurora A. Read Abcam's proprietary immunogen policy (Peptide available as ab13008 .)
Positive control	Jurkat cell lysate.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab12875** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★☆	

Application	Abreviews	Notes
WB	★★★★★	
ICC/IF	★★★☆☆	
ICC	★★★☆☆	

Application notes

ICC: 1/500.
 IF: 1/500.
 IHC-P: 1/15 - 1/20. Antigen retrieval was performed using either Sodium Citrate or Tris/EDTA before commencing with the IHC staining protocol. Customer feedback suggests that a 1/15 dilution of ab12875 is recommended when using the sodium citrate antigen retrieval method and a 1/20 dilution is recommended when using the Tris/EDTA antigen retrieval method.

WB: 1/500. Detects a band of approximately 46 kDa (predicted molecular weight: 46 kDa).

Not yet tested in other applications.
 Optimal dilutions/concentrations should be determined by the end user.

Target

Function

Contributes to the regulation of cell cycle progression. Required for normal mitosis. Associates with the centrosome and the spindle microtubules during mitosis and functions in centrosome maturation, spindle assembly, maintenance of spindle bipolarity, centrosome separation and mitotic checkpoint control. Phosphorylates numerous target proteins, including ARHGEF2, BRCA1, KIF2A, NDEL1, PARD3, PLK1 and BORA. Regulates KIF2A tubulin depolymerase activity (By similarity). Required for normal axon formation. Plays a role in microtubule remodeling during neurite extension. Important for microtubule formation and/or stabilization.

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.

Sequence similarities

Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. Aurora subfamily. Contains 1 protein kinase domain.

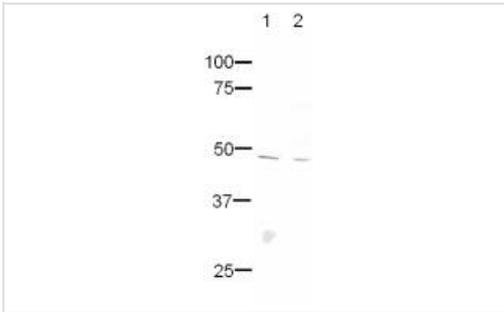
Post-translational modifications

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. Phosphorylated upon DNA damage, probably by ATM or ATR.
 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.

Cellular localization

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.

Images



Western blot - Anti-Aurora A antibody - Centrosome Marker (ab12875)

All lanes : Anti-Aurora A antibody - Centrosome Marker (ab12875) at 1/500 dilution

Lane 1 : Jurkat whole cell lysate

Lane 2 : HeLa whole cell lysate

Lysates/proteins at 20 µg per lane.

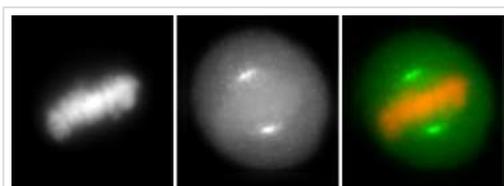
Secondary

All lanes : Alexa Fluor 680 Goat anti Rabbit IgG at 1/5000 dilution

Performed under reducing conditions.

Predicted band size: 46 kDa

Observed band size: 48 kDa



Immunocytochemistry - Anti-Aurora A antibody - Centrosome Marker (ab12875)

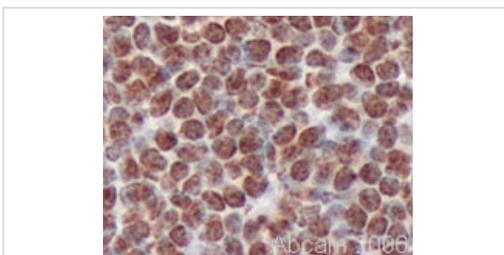
This image was submitted as part of a review by Kirk McManus, University of British Columbia

Metaphase HeLa cells stained with ab12875 and counterstained with DAPI. The antibody shows the localisation of Aurora A to the centrosome during metaphase. 100x magnification.

Panel 1: DNA stained with DAPI.

Panel 2: Cells stained with ab12875 (1/500 dilution).

Panel 3: DAPI staining is shown in red and ab12875 in green.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aurora A antibody - Centrosome Marker (ab12875)

The image shows staining of formalin fixed paraffin embedded human tonsil sections with ab12875 (1/20 working dilution). Clear nuclear staining can be seen.

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