ARG23255
anti-Aurora A antibody [35C1]

Package: 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [35C1] recognizes Aurora A Mouse anri Human Aurora -A kinase monoclonal antibody, clone 35C1 recognizes human Aurora-A kinase also known as Aurora 2, breast tumor-amplified kinase and serine/threonine-protein kinase 6 or 15. Aurora kinase A is member of the Ser/Thr protein kinase family containing a single protein kinase domain, has a molecular weight of ~46kDa and is involved in mitotic spindle assembly (Ducat et al. 2004). Aurora-A kinase is reported to be overexpressed in many epithelial cancers and is thought to play an important role in tumourigenesis (Katayama et al. 2003). Aurora A kinase appears to facilitate phosphorylation of centrin and co-localizes with it at centrosomes with maximum expression through prophase to late metaphase (Lukasiewicz et al. 2011). Mouse anti human Aurora-A kinase, clone 35C1 specifically recognizes an epitope within the non-catalytic N-terminal domain of Aurora-A. Clone 35C1 does not inhibit Aurora-A kinase activity (Cremet et al. 2003).
Tested Reactivity	Hu, Ms
Tested Application	ICC/IF, IP, WB
Host	Mouse
Clonality	Monoclonal
Clone	35C1
Isotype	IgG2b
Target Name	Aurora A
Species	Human
Immunogen	Recombinant Aurora A
Conjugation	Un-conjugated
Alternate Names	ARK-1; AIK; BTAK; Serine/threonine-protein kinase 6; Breast tumor-amplified kinase; Serine/threonine-protein kinase aurora-A; STK15; Serine/threonine-protein kinase 15; AURORA2; Aurora-related kinase 1; hARK1; AURA; STK6; STK7; Aurora kinase A; EC 2.7.11.1; Aurora/IPL1-related kinase 1; Aurora 2; ARK1; PPP1R47

Application Instructions

Application table

Application	Dilution
ICC/IF	Assay-dependent
IP	Assay-dependent
WB	1:500 - 1:1000

Application Note: WB: This product detects a band of approximately 46 kDa in HeLa and Mouse M-ICc12 cell lysates.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

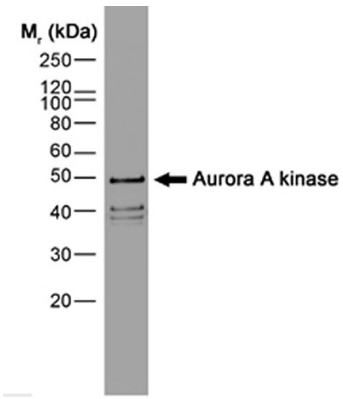
Properties

Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS and 0.09% Sodium azide.
Preservative	0.09% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	AURKA
Gene Full Name	aurora kinase A
Background	The protein encoded by this gene is a cell cycle-regulated kinase that appears to be involved in microtubule formation and/or stabilization at the spindle pole during chromosome segregation. The encoded protein is found at the centrosome in interphase cells and at the spindle poles in mitosis. This gene may play a role in tumor development and progression. A processed pseudogene of this gene has been found on chromosome 1, and an unprocessed pseudogene has been found on chromosome 10. Multiple transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Jul 2008]
Function	Mitotic serine/threonine kinases 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. [UniProt]
Calculated Mw	46 kDa
PTM	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. [UniProt]

Images



ARG23255 anti-Aurora A antibody [35C1] WB image

Western blot: Recombinant Aurora kinase stained with ARG23255 anti-Aurora A antibody [35C1].