

ARK-1 Polyclonal Antibody

Catalog # AP68509

Specification

ARK-1 Polyclonal Antibody - Product Information

Application	WB
Primary Accession	O14965
Reactivity	Human, Mouse, Rat, Monkey
Host	Rabbit
Clonality	Polyclonal

ARK-1 Polyclonal Antibody - Additional Information

Gene ID 6790

Other Names

AURKA; AIK; AIRK1; ARK1; AURA; AYK1; BTAK; IAK1; STK15; STK6; Aurora kinase A; Aurora 2; Aurora/IPL1-related kinase 1; ARK-1; Aurora-related kinase 1; hARK1; Breast tumor-amplified kinase; Serine/threonine-protein kinase 15; Serine/threonin

Dilution

WB~~Western Blot: 1/500 - 1/2000.
Immunohistochemistry: 1/100 - 1/300.
Immunofluorescence: 1/200 - 1/1000.
ELISA: 1/40000. Not yet tested in other applications.

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Storage Conditions

-20°C

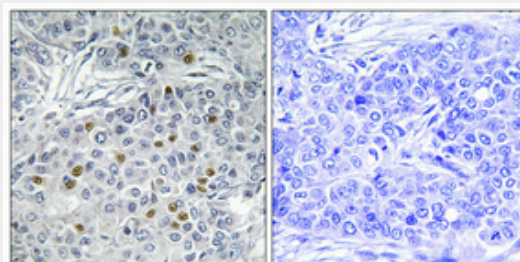
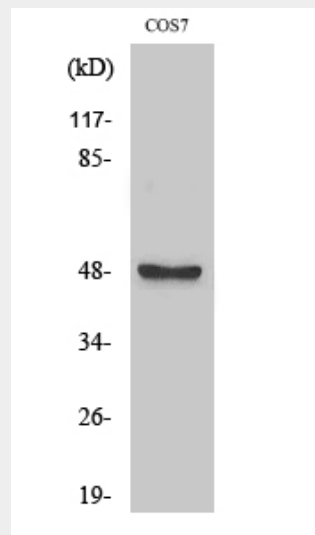
ARK-1 Polyclonal Antibody - Protein Information

Name AURKA

Synonyms AIK, AIRK1, ARK1, AURA, AYK1, BTAK, IAK1

Function

Mitotic serine/threonine kinase that contributes to the regulation of cell cycle



ARK-1 Polyclonal Antibody - Background

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 normal spindle positioning during mitosis and for the localization of NUMA1 and DCTN1 to the cell cortex during metaphase (PubMed:27335426). Required for initial activation of CDK1 at

progression (PubMed:26246606, PubMed:12390251, PubMed:18615013, PubMed:11039908, PubMed:17125279, PubMed:17360485). 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 (PubMed:26246606, PubMed:14523000). Required for normal spindle positioning during mitosis and for the localization of NUMA1 and DCTN1 to the cell cortex during metaphase (PubMed:27335426). Required for initial activation of CDK1 at centrosomes (PubMed:13678582, PubMed:15128871). Phosphorylates numerous target proteins, including ARHGEF2, BORA, BRCA1, CDC25B, DLGP5, HDAC6, KIF2A, LATS2, NDEL1, PARD3, PPP1R2, PLK1, RASSF1, TACC3, p53/TP53 and TPX2 (PubMed:18056443, PubMed:15128871, PubMed:14702041).

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.

target="_blank">14702041,
PubMed:<a href="http://www.uniprot.org/citations/11551964"
target="_blank">11551964,
PubMed:<a href="http://www.uniprot.org/citations/15147269"
target="_blank">15147269,
PubMed:<a href="http://www.uniprot.org/citations/15987997"
target="_blank">15987997,
PubMed:<a href="http://www.uniprot.org/citations/17604723"
target="_blank">17604723,
PubMed:<a href="http://www.uniprot.org/citations/18615013"
target="_blank">18615013).
Regulates KIF2A tubulin depolymerase activity (PubMed:<a href="http://www.uniprot.org/citations/19351716"
target="_blank">19351716).
Important for microtubule formation and/or stabilization (PubMed:<a href="http://www.uniprot.org/citations/18056443"
target="_blank">18056443). Required for normal axon formation (PubMed:<a href="http://www.uniprot.org/citations/19812038"
target="_blank">19812038). Plays a role in microtubule remodeling during neurite extension (PubMed:<a href="http://www.uniprot.org/citations/19668197"
target="_blank">19668197). 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 destabilizing p53/TP53 (PubMed:<a href="http://www.uniprot.org/citations/14702041"
target="_blank">14702041).
Phosphorylates its own inhibitors, the protein phosphatase type 1 (PP1) isoforms, to inhibit their activity (PubMed:<a href="http://www.uniprot.org/citations/11551964"
target="_blank">11551964).
Necessary for proper cilia disassembly prior to mitosis (PubMed:<a href="http://www.uniprot.org/citations/17604723"
target="_blank">17604723),
PubMed:<a href="http://www.uniprot.org/citations/20643351"
target="_blank">20643351).
Regulates protein levels of the anti-apoptosis protein BIRC5 by suppressing the expression of the SCF(FBXL7) E3 ubiquitin-protein ligase substrate adapter FBXL7 through the phosphorylation of the transcription factor FOXP1 (PubMed:<a href="

=["http://www.uniprot.org/citations/28218735"](http://www.uniprot.org/citations/28218735) target="_blank">28218735).

Cellular Location

Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole. Cytoplasm, cytoskeleton, cilium basal body {ECO:0000250|UniProtKB:P97477}. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole {ECO:0000250|UniProtKB:P97477}. Cell projection, neuron projection {ECO:0000250|UniProtKB:P97477}. Note=Detected at the neurite hillock in developing neurons (By similarity). Localizes at the centrosome in mitotic cells from early prophase until telophase, but also localizes to the spindle pole MTs from prophase to anaphase (PubMed:9606188, PubMed:17229885, PubMed:21225229). Colocalized with SIRT2 at centrosome (PubMed:22014574). Moves to the midbody during both telophase and cytokinesis (PubMed:17726514). Associates with both the pericentriolar material (PCM) and centrioles (PubMed:22014574). The localization to the spindle poles is regulated by AAAS (PubMed:26246606) {ECO:0000250|UniProtKB:P97477, ECO:0000269|PubMed:17229885, ECO:0000269|PubMed:17726514, ECO:0000269|PubMed:21225229, ECO:0000269|PubMed:22014574, ECO:0000269|PubMed:26246606, ECO:0000269|PubMed:9606188}

Tissue Location

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

ARK-1 Polyclonal 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](#)