

**Goat Anti-Aurora kinase A / AURKA Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF1128a****Specification**

---

**Goat Anti-Aurora kinase A / AURKA Antibody - Product Information**

|                   |  |
|-------------------|--|
| Application       | WB   |
| Primary Accession | <a href="#">O14965</a>                           |
| Other Accession   | <a href="#">NP_003591</a> , <a href="#">6790</a> |
| Reactivity        | Human  |
| Host              | Goat   |
| Clonality         | Polyclonal                                       |
| Concentration     | 100ug/200ul                                      |
| Isotype           | IgG  |
| Calculated MW     | 45823  |

**Goat Anti-Aurora kinase A / AURKA Antibody - Additional Information****Gene ID** 6790**Other Names**

Aurora kinase A, 2.7.11.1, Aurora 2, Aurora/IPL1-related kinase 1, ARK-1, Aurora-related kinase 1, hARK1, Breast tumor-amplified kinase, Serine/threonine-protein kinase 15, Serine/threonine-protein kinase 6, Serine/threonine-protein kinase aurora-A, AURKA

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-Aurora kinase A / AURKA Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-Aurora kinase A / AURKA Antibody - Protein Information****Name** AURKA ([HGNC:11393](#))**Function**

Mitotic serine/threonine kinase that contributes to the regulation of cell cycle progression (PubMed: [26246606](http://www.uniprot.org/citations/26246606), PubMed: [12390251](http://www.uniprot.org/citations/12390251), PubMed: [18615013](http://www.uniprot.org/citations/18615013), PubMed: [11039908](http://www.uniprot.org/citations/11039908)),

PubMed:<a href="http://www.uniprot.org/citations/17125279" target="\_blank">17125279</a>, PubMed:<a href="http://www.uniprot.org/citations/17360485" target="\_blank">17360485</a>). 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:<a href="http://www.uniprot.org/citations/26246606" target="\_blank">26246606</a>, PubMed:<a href="http://www.uniprot.org/citations/14523000" target="\_blank">14523000</a>). Required for normal spindle positioning during mitosis and for the localization of NUMA1 and DCTN1 to the cell cortex during metaphase (PubMed:<a href="http://www.uniprot.org/citations/27335426" target="\_blank">27335426</a>). Required for initial activation of CDK1 at centrosomes (PubMed:<a href="http://www.uniprot.org/citations/13678582" target="\_blank">13678582</a>, PubMed:<a href="http://www.uniprot.org/citations/15128871" target="\_blank">15128871</a>). Phosphorylates numerous target proteins, including ARHGEF2, BORA, BRCA1, CDC25B, DLGP5, HDAC6, KIF2A, LATS2, NDEL1, PARD3, PPP1R2, PLK1, RASSF1, TACC3, p53/TP53 and TPX2 (PubMed:<a href="http://www.uniprot.org/citations/18056443" target="\_blank">18056443</a>, PubMed:<a href="http://www.uniprot.org/citations/15128871" target="\_blank">15128871</a>, PubMed:<a href="http://www.uniprot.org/citations/14702041" target="\_blank">14702041</a>, PubMed:<a href="http://www.uniprot.org/citations/11551964" target="\_blank">11551964</a>, PubMed:<a href="http://www.uniprot.org/citations/15147269" target="\_blank">15147269</a>, PubMed:<a href="http://www.uniprot.org/citations/15987997" target="\_blank">15987997</a>, PubMed:<a href="http://www.uniprot.org/citations/17604723" target="\_blank">17604723</a>, PubMed:<a href="http://www.uniprot.org/citations/18615013" target="\_blank">18615013</a>). Regulates KIF2A tubulin depolymerase activity (PubMed:<a href="http://www.uniprot.org/citations/19351716" target="\_blank">19351716</a>). Important for microtubule formation and/or stabilization (PubMed:<a href="http://www.uniprot.org/citations/18056443" target="\_blank">18056443</a>). Required for normal axon formation (PubMed:<a href="http://www.uniprot.org/citations/19812038" target="\_blank">19812038</a>). Plays a role in microtubule remodeling during neurite extension (PubMed:<a href="http://www.uniprot.org/citations/19668197" target="\_blank">19668197</a>). 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</a>). 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</a>). Inhibits cilia outgrowth (By similarity). Required for cilia disassembly via phosphorylation of HDAC6 and subsequent deacetylation of alpha-tubulin (PubMed:<a href="http://www.uniprot.org/citations/17604723" target="\_blank">17604723</a>, PubMed:<a href="http://www.uniprot.org/citations/20643351" target="\_blank">20643351</a>). 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" target="\_blank">28218735</a>).

### Cellular Location

Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole {ECO:0000250|UniProtKB:P97477}. Cell projection, neuron projection {ECO:0000250|UniProtKB:P97477}. Cell projection, cilium. Cytoplasm, cytoskeleton, cilium basal body. Basolateral cell membrane {ECO:0000250|UniProtKB:F1PNY0}. 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

#### Goat Anti-Aurora kinase A / AURKA Antibody - Protocols

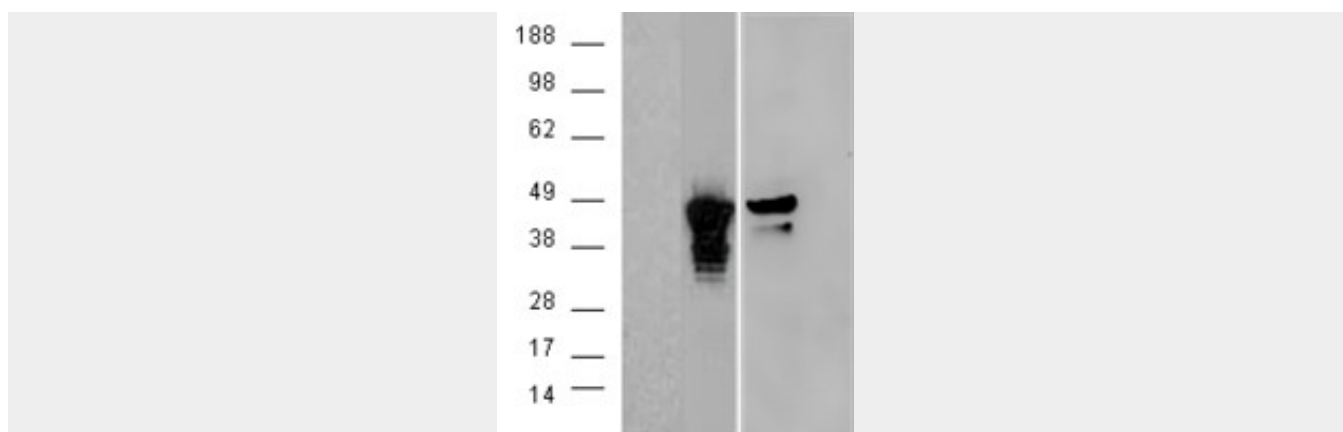
Provided below are standard protocols that you may find useful for product applications.

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

#### Goat Anti-Aurora kinase A / AURKA Antibody - Images



AF1128a (0.1 µg/ml) staining of Jurkat lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



HEK293 overexpressing Aurora kinase A (RC212018) with C-terminal tag (DYKDDDDK) and probed with anti-DYKDDDDK in the left panel and with AF1128a in the right panel (vector-only transfection in first and fourth lanes).

#### **Goat Anti-Aurora kinase A / AURKA Antibody - 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.

#### **Goat Anti-Aurora kinase A / AURKA Antibody - References**

Arpc1b, a centrosomal protein, is both an activator and substrate of Aurora A. Molli PR, et al. J Cell Biol, 2010 Jul 12. PMID 20603326.  
Aurora kinase A as a rational target for therapy in glioblastoma. Barton VN, et al. J Neurosurg Pediatr, 2010 Jul. PMID 20593995.  
Lack of an association between AURKA T91A polymorphisms and breast cancer: a meta-analysis involving 32,141 subjects. Sun H, et al. Breast Cancer Res Treat, 2010 May 13. PMID 20464476.  
Solution structure of human growth arrest and DNA damage 45alpha (Gadd45alpha) and its interactions with proliferating cell nuclear antigen (PCNA) and Aurora A kinase. Sánchez R, et al. J Biol Chem, 2010 Jul 16. PMID 20460379.  
Spindle proteins in resected pancreatic head adenocarcinomas: BubR1 is an independent prognostic factor in pancreatobiliary-type tumours. Gladhaug IP, et al. Histopathology, 2010 Feb. PMID 20459534.