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Rabbit Anti-Aurora A/AP Conjugated antibody

SL2749R-AP

Product Name	Anti-Aurora A/AP
Chinese Name	碱性磷酸酶（AP）标记的有丝分裂激酶 A 抗体
Alias	Aurora A (phospho-Thr288); p-Aurora A(T288); AIK; ARK-1; ARK1; AURA; AURKA; Aurora 2; Aurora A; Aurora A; Aurora Family Kinase 1; aurora kinase A; Aurora Related Kinase 1; Aurora-related kinase 1; Aurora/IPL1 Like Kinase; Aurora/IPL1 Related Kinase 1; Aurora/IPL1-related kinase 1; AURORA2; AYK1; BRAK; Breast Tumor Amplified Kinase; Breast tumor-amplified kinase; BTAK; hARK1; IAK; IPL1 Aurora Related Kinase 1; IPL1 Related Kinase; MGC34538; OTTHUMP00000031340; OTTHUMP00000031341; OTTHUMP00000031342; OTTHUMP00000031343; OTTHUMP00000031344; OTTHUMP00000031345; OTTHUMP00000166071; OTTHUMP00000166072; PPP1R47; Protein phosphatase 1, regulatory subunit 47; Serine/threonine kinase 15; Serine/threonine kinase 6; Serine/threonine kinase; Serine/threonine kinase; Serine/threonine-protein kinase 15; Serine/threonine-protein kinase 6; Serine/threonine-protein kinase aurora-A; STK15; STK6; STK6_HUMAN; STK7.
Research Area	Tumour Cell biology Cyclin Kinases and Phosphatases
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Mouse
Applications	WB=1000-10000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	48kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human Auroa A
Lsotype	IgG

Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Product Detail

background:
Aurora A plays a role in cell cycle regulation during anaphase and/or telophase, in relation to the function of the centrosome/spindle pole region during chromosome segregation. Aurora A plays a key role during tumor development and progression and is overexpressed in many human cancers including breast, ovarian and colorectal. Aurora A is viewed as a potential target for anticancer drug treatment.

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.

Subunit:
Interacts with FBXL7 (By similarity). Interacts with CPEB1, JTB, TACC1, TPX2, PPP2CA, as well as with the protein phosphatase type 1 (PP1) isoforms PPP1CA, PPP1CB and PPP1CC. Interacts also with its substrates ARHGEF2, BORA, BRCA1, KIF2A, PARD3, and p53/TP53. Interaction with BORA promotes phosphorylation of PLK1. Interacts with PIFO. Interacts with GADD45A, competing with its oligomerization. Interacts (via C-terminus) with AUNIP (via C-terminus). Identified in a complex with AUNIP and NIN. Interacts with FRY; this interaction facilitates AURKA-mediated PLK1 phosphorylation.

Subcellular Location:
Cytoplasm.

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.

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.

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

Database links:

Entrez Gene: 6790 Human

Entrez Gene: 20878 Mouse

Omim: 603072 Human

SwissProt: O14965 Human

SwissProt: P97477 Mouse

Unigene: 250822 Human

Unigene: 249363 Mouse

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

细胞的有丝分裂是生物体最基本的生命活动过程,能将复制的基因组精确地分配到下一代子细胞中,在长期的生物进化过程中，生物体形成了一整套完善的监测机制以确保遗传物质精确地分配到子细胞中。
Aurora 激酶(极光激酶)是细胞有丝分裂调控网络中的一类重要的丝氨酸/苏氨酸激酶，Aurora 酪氨酸激酶 B 也是丝氨酸/苏氨酸激酶家族成员之一，目前分为 aurora A，B 及 C。