

Recombinant Human AURKB Protein (A2-A344), Tag Free

Cat. No. AURKB-1112H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human GG-AURB(A2-A344 end) Protein was expressed in Insect cell.
Species	Human
Source	Insect Cells
ProteinLength	A2-A344
Description	Serine/threonine-protein kinase component of the chromosomal passenger complex (CPC), a complex that acts as a key regulator of mitosis. The CPC complex has essential functions at the centromere in ensuring correct chromosome alignment and segregation and is required for chromatin-induced microtubule stabilization and spindle assembly. Involved in the bipolar attachment of spindle microtubules to kinetochores and is a key regulator for the onset of cytokinesis during mitosis. Required for central/midzone spindle assembly and cleavage furrow formation. Key component of the cytokinesis checkpoint, a process required to delay abscission to prevent both premature resolution of intercellular chromosome bridges and accumulation of DNA damage: phosphorylates CHMP4C, leading to retain abscission-competent VPS4 (VPS4A and/or VPS4B) at the midbody ring until abscission checkpoint signaling is terminated at late cytokinesis. AURKB phosphorylates the CPC complex subunits BIRC5/survivin, CDCA8/borealin and INCENP. Phosphorylation of INCENP leads to increased AURKB activity. Other known AURKB substrates involved in centromeric functions and mitosis are CENPA, DES/desmin, GPAF, KIF2C, NSUN2, RACGAP1, SEPTIN1, VIM/vimentin, HASPIN,

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and histone H3. A positive feedback loop involving HASPIN and AURKB contributes to localization of CPC to centromeres. Phosphorylation of VIM controls vimentin filament segregation in cytokinetic process, whereas histone H3 is phosphorylated at 'Ser-10' and 'Ser-28' during mitosis (H3S10ph and H3S28ph, respectively). A positive feedback between HASPIN and AURKB contributes to CPC localization. AURKB is also required for kinetochore localization of BUB1 and SGO1. Phosphorylation of p53/TP53 negatively regulates its transcriptional activity. Key regulator of active promoters in resting B- and T-lymphocytes: acts by mediating phosphorylation of H3S28ph at active promoters in resting B-cells, inhibiting RNF2/RING1B-mediated ubiquitination of histone H2A and enhancing binding and activity of the USP16 deubiquitinase at transcribed genes. Acts as an inhibitor of CGAS during mitosis: catalyzes phosphorylation of the N-terminus of CGAS during the G2-M transition, blocking CGAS liquid phase separation and activation, and thereby preventing CGAS-induced autoimmunity.

Form	Liquid
Endotoxin	< 0.01 EU per µg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

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GENE INFORMATION

Gene Name	AURKB aurora kinase B [Homo sapiens (human)]
Official Symbol	AURKB
Synonyms	AURKB; aurora kinase B; serine/threonine kinase 12, STK12; Aik2; AIM 1; ARK2; AurB; aurora 1; aurora B; IPL1; PPP1R48; protein phosphatase 1; regulatory subunit 48; STK5; ARK-2; STK-1; aurora-1; aurora-B; aurora kinase B-Sv1; aurora kinase B-Sv2; aurora-related kinase 2; serine/threonine kinase 12; aurora/IPL1-related kinase 2; serine/threonine-protein kinase 5; serine/threonine-protein kinase 12; serine/threonine-protein kinase aurora-B; protein phosphatase 1, regulatory subunit 48; aurora- and lpl1-like midbody-associated protein 1; AIK2; AIM1; AIM-1; STK12; aurkb-sv1; aurkb-sv2;
Gene ID	9212
mRNA Refseq	NM_001256834
Protein Refseq	NP_001243763
MIM	604970
UniProt ID	Q96GD4

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