

Recombinant human Aurora B protein ab51435

[4 References](#) [5 Images](#)

Description

| | |
|--------------------------|--|
| Product name | Recombinant human Aurora B protein |
| Purity | > 70 % Densitometry. Affinity purified. |
| Expression system | Baculovirus infected Sf9 cells |
| Protein length | Full length protein |
| Animal free | No |
| Nature | Recombinant |
| Species | Human |
| Tags | GST tag N-Terminus |

Specifications

Our [Abpromise guarantee](#) covers the use of **ab51435** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| | |
|-------------------------|--|
| Applications | Functional Studies SDS-PAGE Western blot |
| Form | Liquid |
| Additional notes | ab51435 was expressed in Sf9 insect cells. ab43614 (Human Myelin Basic Protein full length protein) can be utilized as a substrate for assessing Kinase activity |

Preparation and Storage

| | |
|------------------------------|--|
| Stability and Storage | Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.0038% EGTA, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution. |
|------------------------------|--|

General Info

Function

May be directly involved in regulating the cleavage of polar spindle microtubules and is a key regulator for the onset of cytokinesis during mitosis. 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. Phosphorylates 'Ser-10' and 'Ser-28' of histone H3 during mitosis. Required for kinetochore localization of BUB1 and SGOL1. Interacts with INCENP.

Tissue specificity

High level expression seen in the thymus. It is also expressed in the spleen, lung, testis, colon, placenta and fetal liver. Expressed during S and G2/M phase and expression is up-regulated in cancer cells during M phase.

Involvement in disease

Note=Disruptive regulation of expression is a possible mechanism of the perturbation of chromosomal integrity in cancer cells through its dominant-negative effect on cytokinesis.

Sequence similarities

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

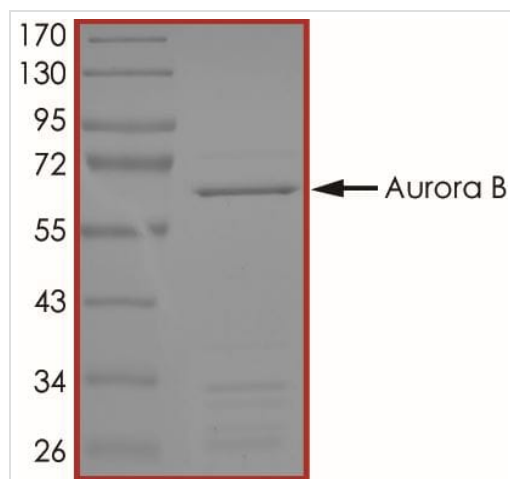
Post-translational modifications

Ubiquitinated by different BCR (BTB-CUL3-RBX1) E3 ubiquitin ligase complexes. Ubiquitinated by the BCR(KLHL9-KLHL13) E3 ubiquitin ligase complex, ubiquitination leads to removal from mitotic chromosomes and is required for cytokinesis. During anaphase, the BCR(KLHL21) E3 ubiquitin ligase complex recruits the CPC complex from chromosomes to the spindle midzone and mediates the ubiquitination of AURKB. Ubiquitination of AURKB by BCR(KLHL21) E3 ubiquitin ligase complex may not lead to its degradation by the proteasome.

Cellular localization

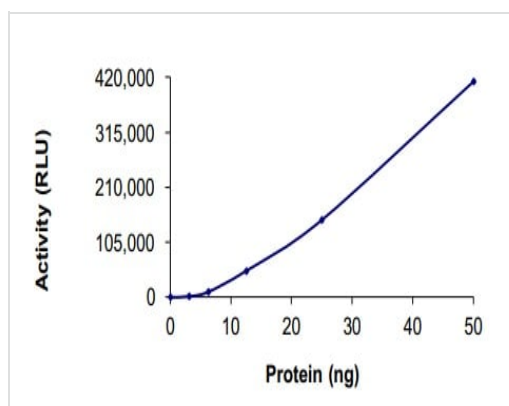
Nucleus. Chromosome. Chromosome > centromere. Cytoplasm > cytoskeleton > spindle. Localizes on chromosome arms and inner centromeres from prophase through metaphase and then transferring to the spindle midzone and midbody from anaphase through cytokinesis. Colocalized with gamma tubulin in the mid-body.

Images



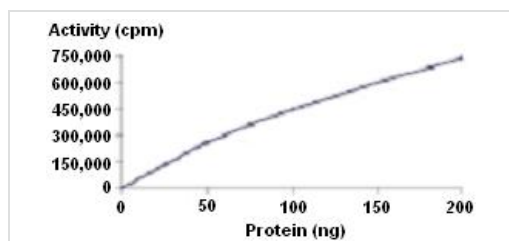
SDS PAGE analysis of ab51435

SDS-PAGE - Recombinant human Aurora B protein
(ab51435)



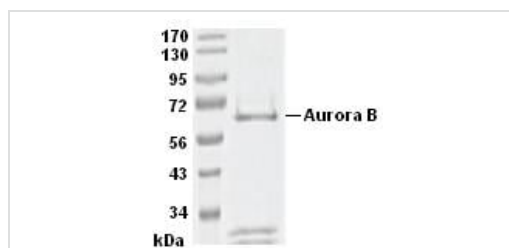
Functional Studies - Recombinant human Aurora B protein (ab51435)

The specific activity of Aurora B (ab51435) was determined to be 19.6 nmol/min/mg as per activity assay protocol and was equivalent to 189.2 nmol/min/mg as per radiometric assay.



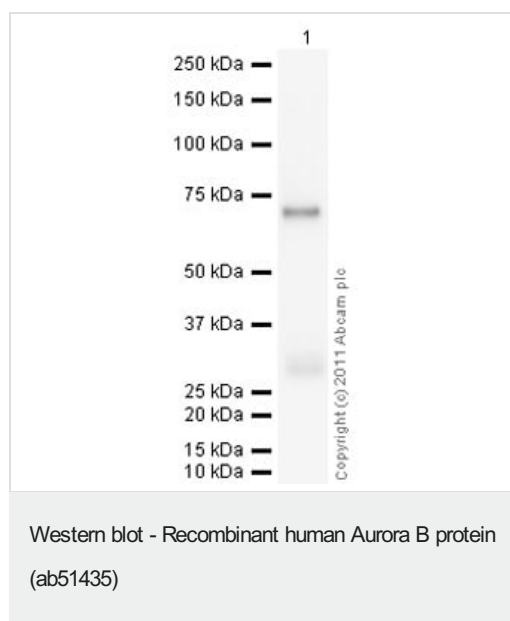
Functional Studies - Recombinant human Aurora B protein (ab51435)

Kinase activity assay - specific activity 190nmol/min/mg



SDS-PAGE - Recombinant human Aurora B protein (ab51435)

Recombinant human Aurora B (tagged). Molecular weight 68 kDa.



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