



AURORA B (Human), Active

Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPA31

Lot No. H318-1
5 µg 0.1 µg/µl

Background:

AURORA B is a member of the Aurora kinase family that associates with microtubules during chromosome movement and segregation. AURORA B localizes to the microtubules near kinetochores, specifically to the specialized microtubules called K-fibers (1). AURORA B inhibits the microtubule depolymerizing activity of mitotic centromere-associated kinesin (MCAK) by phosphorylating MCAK on Ser92 (2). This phosphorylation also regulates MCAK translocation from kinetochores to the centromere. AURORA B has been identified as a target for the development of new anticancer agents since inhibition of AURORA B gives rise to the more pronounced antiproliferative phenotype.

Product Description:

Recombinant full-length human AURORA B was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag. The gene accession number is NM_004217.

Gene Aliases:

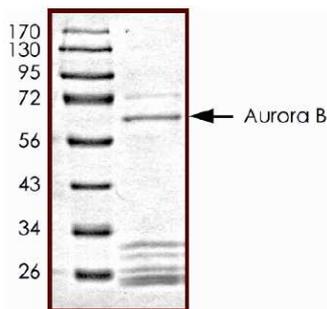
AURKB, AIK2; AIM1; ARK2; AurB; IPL1; AIM-1; STK12

Formulation:

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.

Purity & Molecular Weight:

The purity was determined to be >70% by densitometry. Approx. MW 68kDa.



Storage:

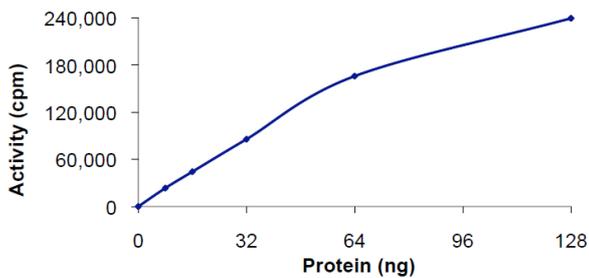
Store product at -70°C . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

**Stability:**

1 year at -70°C from date of shipment.

Specific Activity:

The specific activity was determined to be 165 nmol /min/mg as per Activity Assay Protocol.

**Activity Assay Protocol:**

Assay activity of the kinase in a 25 μL reaction consisting of 5 μL of 5 X Kinase Assay Buffer, 5 μL of 1 mg/ml the Substrate Solution, 10 μL of diluted kinase and 5 μL of 250 μM ATP solution containing [γ - ^{32}P] ATP (0.167 $\mu\text{Ci}/\mu\text{L}$). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C . Terminate the reaction by spotting 20 μL of the reaction mixture onto phosphocellulose P81 paper. Air-dry the P81 paper and sequentially wash 4 times for approximately 10 minutes each in 1% phosphoric acid with constant gentle stirring. Count the P81 paper in a liquid scintillation counter.

Substrate Solution:

Myelin Basic Protein (MBP) diluted in distilled H_2O to a final concentration of 1mg/ml.

5 X Kinase Assay Buffer:

25mM MOPS, pH 7. 2, 12.5mM β -glycerol-phosphate, 25mM MgCl_2 , 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

References:

- 1.Shannon, K B. et al: Chromosome dynamics: new light on Aurora B kinase function. Curr Biol. 2002 Jul 9;12(13):R458-60.
- 2.Andrews, P. D. et al: Aurora B regulates MCAK at the mitotic centromere. Dev. Cell 6: 253-268, 2004

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