Recombinant AURKB protein

Catalog No: 81352, 81752
Expressed In: Baculovirus

Quantity: 20, 1000 µg
Concentration: 0.4 µg/µl
Source: Human

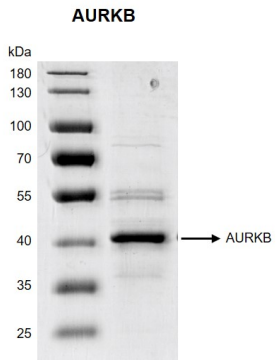
Buffer Contents: Recombinant AURKB protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5 mM TCEP.

Background: AURKB (Aurora Kinase B) is a member of the aurora kinase subfamily of serine/threonine kinases and phosphorylates the CPC complex subunits BIRC5/survivin, CDCA8/borealin and INCENP. Phosphorylation of INCENP leads to increased AURKB activity. The CPC complex acts as a key regulator of mitosis. which has essential functions at the centromere in ensuring correct chromosome alignment and segregation and is required for chromatininduced 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. Other known AURKB substrates involved in centromeric functions and mitosis are CENPA, DES/desmin, GPAF, KIF2C, NSUN2, RACGAP1, SEPTIN1, VIM/ vimentin, HASPIN, and histone H3. 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.

Protein Details: Recombinant AURKB protein was expressed in baculovirus expression system as the full length protein (accession number AAC12709.1) with a N-terminal FLAG tag. The molecular weight of the protein is 40.5 kDa.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data this product is shown.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

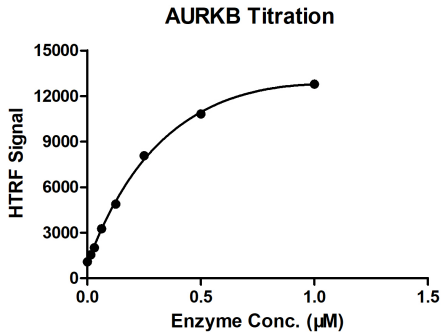


Recombinant AURKB protein gel

10% SDS-PAGE with Coomassie staining

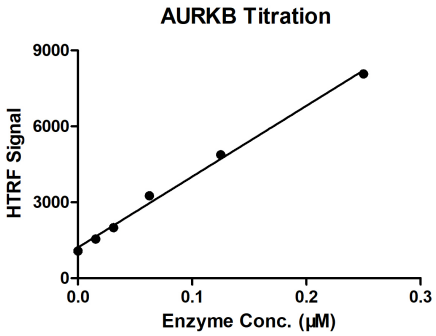
MW: 40.5 kDa

Purity: >80%



HTRF assay for AURKB activity

1 μM STK S2 substrate was incubated with different concentrations of AURKB protein in a 10 μl reaction system containing 1×Enzymatic Buffer, 5 mM MgCl2, 1 mM DTT and 100 μM ATP for 1 hour. The 10 μl detection reagents containing STK antibody (1:2) and SA-XL665 (1:100) diluted with 1× Detection Buffer were added and incubated with the reactions for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.



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