

Recombinant human PLK1 protein ab51426

1 References 画像数 5

製品の詳細

製品名	Recombinant human PLK1 protein
生理活性	Specific activity 17nmol/min/mg.
精製度	> 70 % Affinity purified. Purified by affinity chromatography
発現系	Baculovirus infected Sf9 cells
アクセッション番号	P53350
タンパク質長	Full length protein
Animal free	No
由来	Recombinant
生物種	Human

配列	MSAAVTAGKL ARAPADPGKA GVPGVAAPGA PAAAPPAKEI PEVLVDPRSR RRYVRGRFLG KGGFAKCFEI SDADTKEVFA GKIVPKSLLL KPHQREKMSM EISIHRS LAH QHVVG FHGFF EDNDFVFVVL ELCRRRS LLE LHKRRKALTE PEARYYLRQI VLGCQYLHRN RVIHRDLKLG NLFLNEDLEV KIGDFGLATK VEYDGERKKT LCGTPNYIAP EVLSKKGHSF EVDVWSIGCI MYTLLVGKPP FETSCLKETY LRIKKNEYSI PKHINPVAAS LIQKMLQ TDP TARPTINELL NDEFFTSGYI PARLPITCLT IPPRFSIAPS SLDPSNRKPL TVLNKGLENP LPERPREKEE PVVRETGEVV DCHLSDMLQQ LHSV NASKPS ERGLVRQEEA EDPACIPIFW VSKWVDYSDK YGLGYQLCDN SVGVLFNDST RLILYNDGDS LQYIERDGTE SYLTVSSHPN SLMKKITLLK YFRNYMSEHL LKAGANITPR EGDELARLPY LRTWFRTRSA IILHLSNGSV QINFFQDHTK LILCPLMAAV TYIDEKRDFR TYRLSLLEEY GCCKELASRL RYARTMVDKL LSSRSASNRL KAS
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予測される分子量	70 kDa
領域	1 to 603
タグ	His tag N-Terminus

特性

Our **Abpromise guarantee** covers the use of **ab51426** in the following tested applications.

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

アプリケーション

Western blot

Functional Studies

SDS-PAGE

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

製品の状態

Liquid

備考

ab91090 (Cow Casein full length protein) can be utilized as a substrate for assessing Kinase activity

前処理および保存

保存方法および安定性

Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.

pH: 7.00

Constituents: 0.00174% PMSF, 0.82% Sodium phosphate, 0.00308% DTT, 25% Glycerol (glycerin, glycerine), 1.74% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

関連情報

機能

Serine/threonine-protein kinase that performs several important functions throughout M phase of the cell cycle, including the regulation of centrosome maturation and spindle assembly, the removal of cohesins from chromosome arms, the inactivation of APC/C inhibitors, and the regulation of mitotic exit and cytokinesis. Required for recovery after DNA damage checkpoint and entry into mitosis. Required for kinetochore localization of BUB1B. Phosphorylates SGOL1. Required for spindle pole localization of isoform 3 of SGOL1 and plays a role in regulating its centriole cohesion function. Phosphorylates BORA, and thereby promotes the degradation of BORA. Contributes to the regulation of AURKA function. Regulates TP53 stability through phosphorylation of TOPORS.

組織特異性

Placenta and colon.

配列類似性

Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. CDC5/Polo subfamily. Contains 2 POLO box domains.

Contains 1 protein kinase domain.

発生段階

Accumulates to a maximum during the G2 and M phases, declines to a nearly undetectable level following mitosis and throughout G1 phase, and then begins to accumulate again during S phase.

翻訳後修飾

Catalytic activity is enhanced by phosphorylation of Thr-210. Phosphorylation at Thr-210 is first detected on centrosomes in the G2 phase of the cell cycle, peaks in prometaphase and gradually disappears from centrosomes during anaphase.

Autophosphorylation and phosphorylation of Ser-137 may not be significant for the activation of PLK1 during mitosis, but may enhance catalytic activity during recovery after DNA damage checkpoint.

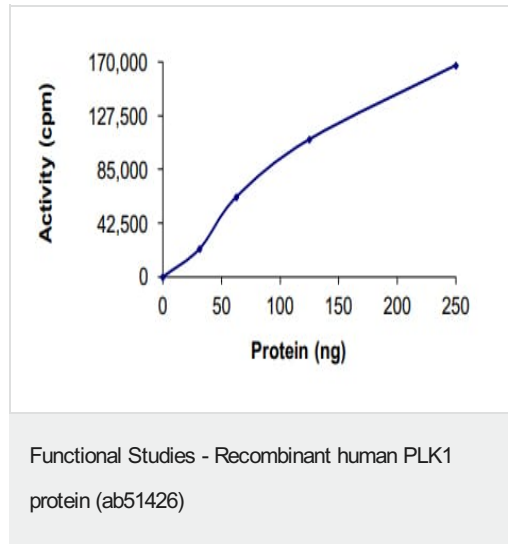
Ubiquitinated by the anaphase promoting complex/cyclosome (APC/C) in anaphase and following

DNA damage, leading to its degradation by the proteasome. Ubiquitination is mediated via its interaction with FZR1/CDH1. Ubiquitination and subsequent degradation prevents entry into mitosis and is essential to maintain an efficient G2 DNA damage checkpoint.

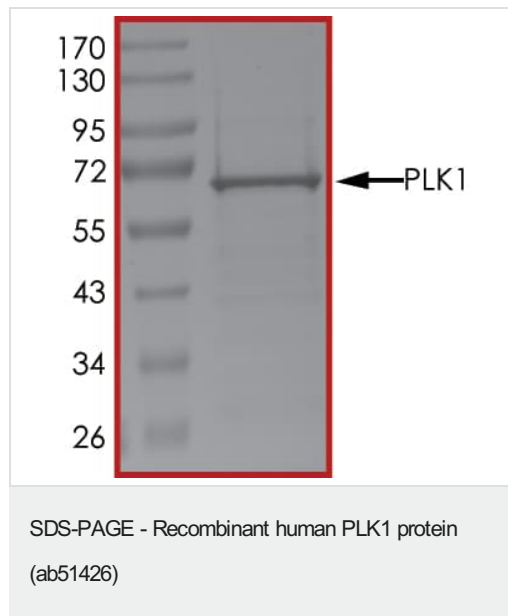
細胞内局在

Nucleus. Chromosome > centromere > kinetochore. Cytoplasm > cytoskeleton > centrosome. During early stages of mitosis, the phosphorylated form is detected on centrosomes and kinetochores. Localizes to the outer kinetochore. Presence of SGOL1 and interaction with the phosphorylated form of BUB1 is required for the kinetochore localization.

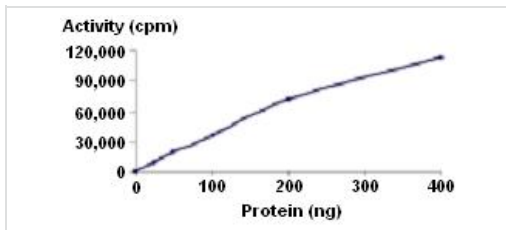
画像



The specific activity of PLK1 (ab51426) was determined to be 16.5 nmol/min/mg as per activity assay protocol

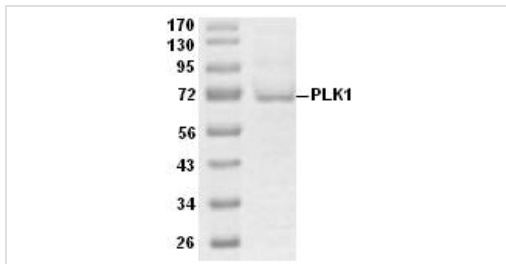


SDS PAGE analysis of ab51426



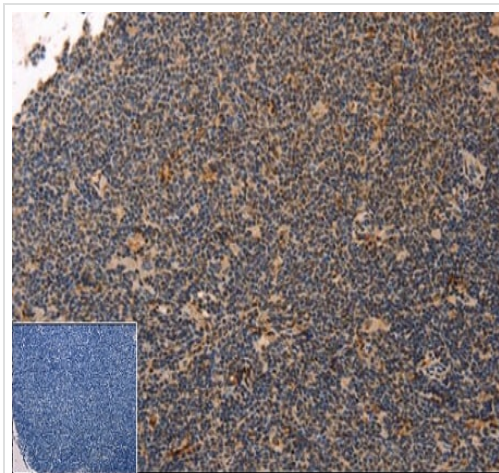
Kinase activity assay. Specific activity 17 nmol/min/mg.

Functional Studies - Recombinant human PLK1 protein (ab51426)



Recombinant human PLK1 protein (His tagged). Molecular weight 70 kDa.

SDS-PAGE - Recombinant human PLK1 protein (ab51426)



Immunohistochemistry of Human Lymphoma tissue staining PLK1 with ab51426 at 1/40. Control is treated with fusion protein.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Recombinant human PLK1 protein (ab51426)

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