abcam

Product datasheet

Anti-PLK1 (phospho T210) antibody ab12157

1 Abreviews 5 References 3 Images

Overview

Product name	Anti-PLK1 (phospho T210) antibody
Description	Rabbit polyclonal to PLK1 (phospho T210)
Host species	Rabbit
Specificity	Detects a band at 55kDa in mouse A20 cells that we believe corresponds to Plk1 (predicted molecular weight 68kDa). Also gives positive staining in immunohistochemistry in human colon carcinoma as expected. However, we have been unable to conclusively demonstrate the specificity of the antibody for phospho T210 Plk1.
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat, Xenopus laevis, Drosophila melanogaster, Zebrafish
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 0.42% Potassium phosphate, 0.87% Sodium chloride
Purity	Immunogen affinity purified
Purification notes	Purified by immunoaffinity chromatography using phospho peptide coupled to agarose beads followed by solid phase adsorption(s) against non-phospho peptide and non-specific peptide to remove any unwanted reactivities.
Clonality	Polyclonal

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab12157 in the following tested applications.

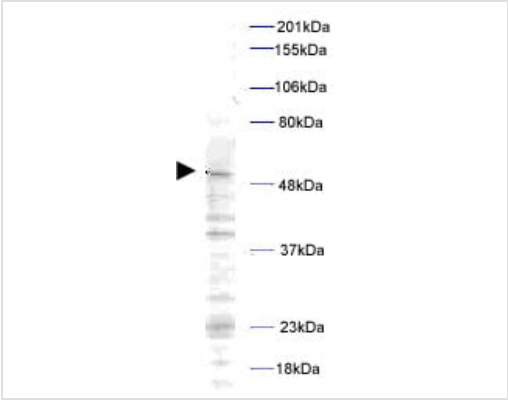
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	(1)	1/200 - 1/2000. Predicted molecular weight: 68 kDa.
IHC-P		Use at an assay dependent concentration.

Target

Function	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.
Tissue specificity	Placenta and colon.
Sequence similarities	Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. CDC5/Polo subfamily. Contains 2 POLO box domains. Contains 1 protein kinase domain.
Developmental stage	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.
Post-translational modifications	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.
Cellular localization	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.

Images

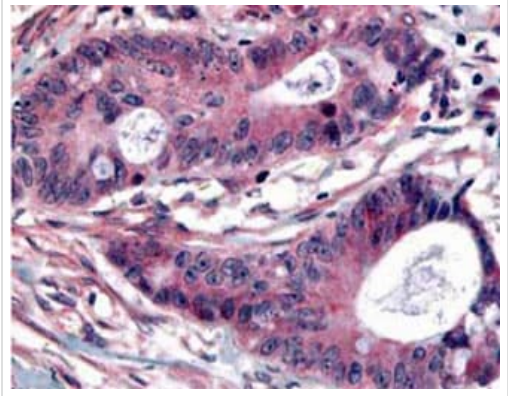


Western blot - Anti-PLK1 (phospho T210) antibody (ab12157)

Anti-PLK1 (phospho T210) antibody (ab12157) at 1/500 dilution + Mouse A20 cell lysate

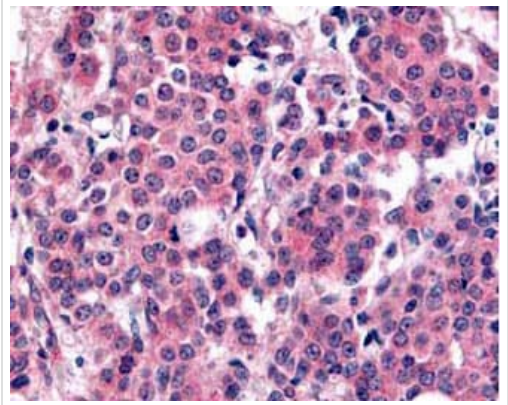
Predicted band size: 68 kDa
Observed band size: 55 kDa
Additional bands at: 23 kDa, 40 kDa, 42 kDa. We are unsure as to the identity of these extra bands.

We believe the 55kDa band represents Plk1. However, we cannot be sure that the antibody is detecting phospho T210 Plk1 specifically.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PLK1 (phospho T210) antibody (ab12157)

ab12157 was used at a 1:200 dilution to detect Plk1 by immunohistochemistry in human colon carcinoma tumor tissue. Tissue was formalin-fixed and paraffin embedded. Detection with AEC (pink), nuclear counterstaining with Haematoxylin (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PLK1 (phospho T210) antibody (ab12157)

ab12157 (1/200) detecting Plk1 (phospho T210) in formalin-fixed paraffin embedded human breast carcinoma tissue.

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors