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Datasheet for 600-401-446

PLK1 phospho T210 Antibody

Overview

Description:	Anti-Polo-like Kinase (Plk1) pT210 (RABBIT) Antibody - 600-401-446
Item No.:	600-401-446
Size:	100 µg
Applications:	ELISA, IHC, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	Polo-like Kinase pT210 Antibody detects phosphorylated Plk1 protein. Polo-like kinase 1, also known as Plk-1, serine-threonine protein kinase 13 and STPK13, may be required for cell division and have a role during G₁ or S phase and is associated with the phosphorylation of cyclin B₁. Phosphorylation of Plk-1 on T210 contributes to proper mitotic progression. Plk-1 has a nuclear localization and 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. Plk-1 is a member of the Ser/Thr protein kinase family and the CDC5/Polo subfamily and contains 2 POLO box domains.
Synonyms:	rabbit anti-PLK1 pT210 antibody, Serine/threonine-protein kinase PLK1, rabbit anti-polio like kinase 1 antibody, Serine/threonine protein kinase 13 antibody, PLK-1, PLK 1, STPK13
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	PLK1
Reactivity:	Human, Mouse
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide

Immunogen:	Anti-Polo-like Kinase pT210 Antibody was produced by repeated immunizations with a synthetic phospho peptide corresponding to an internal region near aa 200-225 of Human Polo-like kinase 1 (Plk1) protein.
Purity/Specificity:	Anti-Polo-like Kinase pT210 Antibody is directed against human phosphorylated Plk1 protein. This antibody was affinity purified. This antibody is specific for phosphorylated human Plk-1 protein at the pT210 residue. BLAST analysis indicates 100 % homology of the immunizing sequence with Plk-1 homologues from human, chimpanzee, pig, chicken, mouse, rat, Xenopus, dog, mosquito, zebra fish, starfish, sea urchin and fruit fly. Cross reactivity with Plk-1 protein homologues from C.elgans and honeybee may also occur as sequence homology varies by one amino acid residue in this sequence. Reactivity with Plk-1 protein from other sources is not known. Minimal reactivity is expected with the non-phosphorylated form of the protein.
Relevant Links:	• UniProtKB - P53350 • NCBI - 21359873 • GeneID - 5347

Application Details

Tested Applications:	ELISA, IHC, WB
Application Note:	This affinity-purified antibody has been tested for use in ELISA, IHC, and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 68 kDa in size corresponding to Plk-1 by western blotting in the appropriate cell lysate or extract. This antibody is positive by IHC on kidney, liver, cancer, thyroid and lymphocyte tissue.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:3,000 - 1:12,000
IHC:	1:200 - 1:1,000
WB:	1:200 - 1:2,000

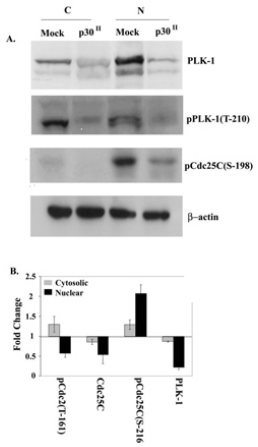
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

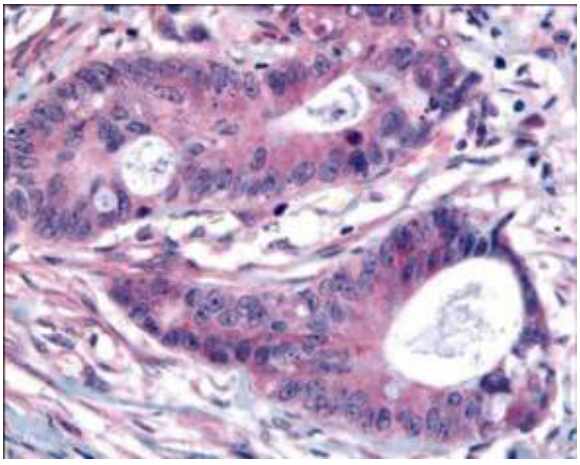
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

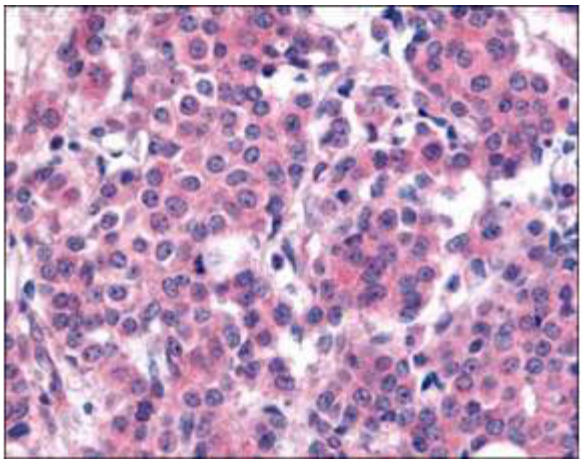
Images



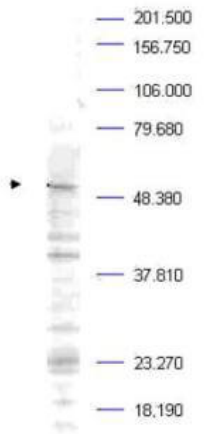
Western Blot
PLK1 protein level is reduced in p30 Jurkat T-cells and overall quantified comparisons. A) Western blot analysis of cytosolic (C) or nuclear extract (N) prepared from either p30 expressing or mock Jurkat T-cells and probed with anti-PLK1, pPLK-1(T-210) and pCdc25C(S-198). β-actin was used as a loading control. B) Densitometric analysis of western blot: Band intensity was quantified by Gel-Pro Analyzer 3.1® and normalized to β-actin. Graph represents densitometric analysis of 4 independent western blots for each of the represented proteins. Fig 6. PMID: 17634129



Immunohistochemistry
Affinity Purified Plk1 pT210 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. Personal Communication, Alan Yen, LifeSpanBiosciences, Seattle, WA.



Immunohistochemistry
Affinity Purified Plk1 pT210 was used at a 1:200 dilution to detect Plk1 by immunohistochemistry in human breast carcinoma tumor tissue. Tissue was formalin-fixed and paraffin embedded. Personal Communication, Alan Yen, LifeSpanBiosciences, Seattle, WA.



Western Blot
Western blot analysis is shown using Rockland's Affinity Purified anti-Plk-1 pT210 antibody to detect endogenous protein present in a Mouse A20 whole cell lysate (arrowhead). Comparison to a molecular weight marker indicates a band of ~68 kDa corresponding to Plk-1 protein. It is suggested to use a nuclear extract from synchronized cells to greatly increase the abundance of this protein in preparations. The blot was incubated with a 1:500 dilution of the antibody at room temperature followed by detection using standard techniques. Personal communication Steven Pelech, Kinexus Inc. Vancouver, BC.

Western Blot
Western blot analysis is shown to detect endogenous and recombinant protein present in HeLa cell lysates transfected with various plk-1 mutation constructs. Blots were reacted with anti-Plk-1 pT210 (panel A) and pan reactive anti-Plk-1 (panel B). Transfected cells were treated with 1 uM nocodazole followed by cell collection, lysate preparation, SDS-PAGE and western blotting. Using a 1:1000 dilution, anti-Plk-1 pT210 detects a single band corresponding to endogenous plk-1, but does not detect recombinant forms of the protein presumably because of a lack of phosphorylation in these mutants. Personal communication Hai Jiang, Northwestern Univ.

References

- Datta A et al. Human T-lymphotropic virus type-1 p30 alters cell cycle G2 regulation of T lymphocytes to enhance cell survival. *Retrovirology.* (2007)

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