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Phospho-CHK1(S317) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3070a

Product Information

Application	DB, WB, IHC-P, E
Primary Accession	O14757
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB7845, RB18425

Additional Information

Other Names	Serine/threonine-protein kinase Chk1, CHK1 checkpoint homolog, Cell cycle checkpoint kinase, Checkpoint kinase-1, CHEK1, CHK1
Target/Specificity	This CHK1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S317 of human CHK1.
Dilution	DB~~1:500 WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-CHK1(S317) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Background

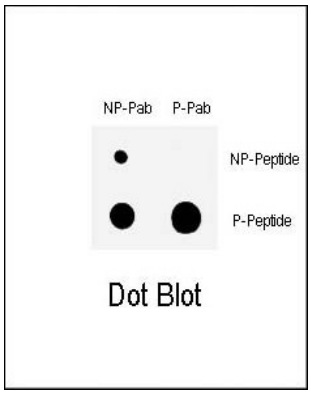
Checkpoint pathways control the order and timing of cell cycle transitions and ensure that critical events, such as DNA replication and chromosome segregation, are completed with high fidelity. The S. pombe Chk1 gene encodes a protein kinase that is required for the DNA damage checkpoint. Antibodies against CHK1 recognized a 54-kD protein on immunoblots of mammalian cell extracts. However,CHK1 is modified in response to DNA damage. In vitro, CHK1 directly phosphorylated a regulator of CDC2 tyrosine phosphorylation, CDC25C. In response to DNA damage, CHK1 phosphorylates and inhibits CDC25C, thus

preventing activation of the CDC2-cyclin B complex and mitotic entry. CHK1 directly phosphorylates CDC25A during an unperturbed cell cycle, and that phosphorylation of CDC25A by CHK1 is required for cells to delay cell cycle progression in response to double-strand DNA breaks.

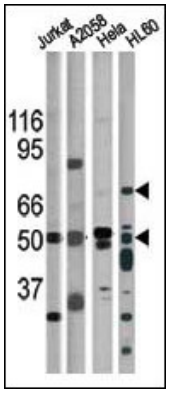
References

Kramer, A., et al., Nat. Cell Biol. 6(9):884-891 (2004).
Xu, X., et al., J. Biol. Chem. 279(33):34091-34094 (2004).
Ng, C.P., et al., J. Biol. Chem. 279(10):8808-8819 (2004).
Chen, M.S., et al., Mol. Cell. Biol. 23(21):7488-7497 (2003).
Groth, A., et al., EMBO J. 22(7):1676-1687 (2003).

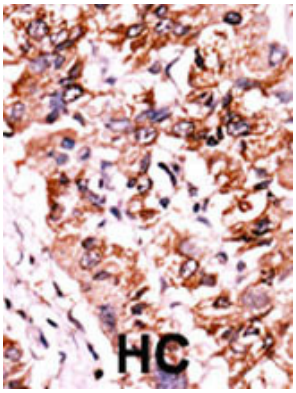
Images



Dot blot analysis of anti-Phospho-CHK1-S317 Antibody (Cat. #AP3070a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antobodies working concentration was 0.5ug per ml.



The anti-Phospho-CHK1-S317 Pab (Cat. #AP7219b) is used in Western blot for detection in, from left to right, Jurkat, A2058, Hela, and HL60 tissue lysates.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- TLK1B mediated phosphorylation of Rad9 regulates its nuclear/cytoplasmic localization and cell cycle checkpoint.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.