

产品名称: Phospho-Chk1 (S296) (14A3) Rabbit Monoclonal Antibody
产品货号: AMRe05875



产品概述 (Summary)

产品名称 (Production Name)	Phospho-Chk1 (S296) (14A3) Rabbit Monoclonal Antibody
描述 (Description)	Recombinant rabbit monoclonal antibody
宿主 (Host)	Rabbit
应用 (Application)	WB
种属反应性 (Reactivity)	Human

产品性能 (Performance)

偶联物 (Conjugation)	Unconjugated
修饰 (Modification)	Phosphorylated
同种型 (Isotype)	IgG
克隆 (Clonality)	Monoclonal
形式 (Form)	Liquid
存放说明 (Storage)	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
储存溶液 (Buffer)	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.
纯化方式 (Purification)	Affinity purification

免疫原信息 (Immunogen)

基因名 (Gene Name)	CHEK1
别名 (Alternative Names)	Checkpoint, S. pombe, homolog of, 1; CHEK1; CHK1; CHK1 checkpoint homolog (S. pombe); Serine/threonine-protein kinase Chk1;
基因 ID (Gene ID)	1111.0
蛋白 ID (SwissProt ID)	O14757.

产品应用 (Application)

稀释比 (Dilution Ratio)	WB 1:500-1:2000
蛋白分子量 (Molecular Weight)	54kDa

Chk1 kinase acts downstream of ATM/ATR kinase and plays an important role in DNA damage checkpoint control, embryonic development, and tumor suppression. Activation of Chk1 involves phosphorylation at Ser317 and Ser345 by ATM/ATR, followed by autophosphorylation of Ser296. Activation occurs in response to blocked DNA replication and certain forms of genotoxic stress. Serine/threonine-protein kinase which is required for checkpoint-mediated cell cycle arrest and activation of DNA repair in response to the presence of DNA damage or unreplicated DNA (PubMed:[11535615](http://www.uniprot.org/citations/11535615), PubMed:[12446774](http://www.uniprot.org/citations/12446774), PubMed:[12399544](http://www.uniprot.org/citations/12399544), PubMed:[14559997](http://www.uniprot.org/citations/14559997), PubMed:[14988723](http://www.uniprot.org/citations/14988723), PubMed:[15311285](http://www.uniprot.org/citations/15311285), PubMed:[15665856](http://www.uniprot.org/citations/15665856), PubMed:[15650047](http://www.uniprot.org/citations/15650047), PubMed:[32357935](http://www.uniprot.org/citations/32357935)). May also negatively regulate cell cycle progression during unperturbed cell cycles (PubMed:[11535615](http://www.uniprot.org/citations/11535615), PubMed:[12446774](http://www.uniprot.org/citations/12446774), PubMed:[12399544](http://www.uniprot.org/citations/12399544), PubMed:[14559997](http://www.uniprot.org/citations/14559997), PubMed:[14988723](http://www.uniprot.org/citations/14988723), PubMed:[15311285](http://www.uniprot.org/citations/15311285), PubMed:[15665856](http://www.uniprot.org/citations/15665856), PubMed:[15650047](http://www.uniprot.org/citations/15650047)). This regulation is achieved by a number of mechanisms that together help to preserve the integrity of the genome (PubMed:[11535615](http://www.uniprot.org/citations/11535615), PubMed:[12446774](http://www.uniprot.org/citations/12446774), PubMed:[12399544](http://www.uniprot.org/citations/12399544), PubMed:[14559997](http://www.uniprot.org/citations/14559997), PubMed:[14988723](http://www.uniprot.org/citations/14988723), PubMed:[15311285](http://www.uniprot.org/citations/15311285), PubMed:[15665856](http://www.uniprot.org/citations/15665856), PubMed:[15650047](http://www.uniprot.org/citations/15650047)). Recognizes the substrate consensus sequence [R-X-X- S/T] (PubMed:[11535615](http://www.uniprot.org/citations/11535615), PubMed:[12446774](http://www.uniprot.org/citations/12446774), PubMed:[12399544](http://www.uniprot.org/citations/12399544), PubMed:[14559997](http://www.uniprot.org/citations/14559997), PubMed:[14988723](http://www.uniprot.org/citations/14988723), PubMed:[15311285](http://www.uniprot.org/citations/15311285), PubMed:[15665856](http://www.uniprot.org/citations/15665856), PubMed:[15650047](http://www.uniprot.org/citations/15650047)).

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[12446774](http://www.uniprot.org/citations/12446774) , PubMed:12399544 , PubMed:14559997 , PubMed:14988723 , PubMed:15311285 , PubMed:15665856 , PubMed:15650047). Binds to and phosphorylates CDC25A, CDC25B and CDC25C (PubMed:9278511 , PubMed:12676583 , PubMed:14681206 , PubMed:12676925 , PubMed:12759351 , PubMed:19734889 , PubMed:14559997). Phosphorylation of CDC25A at 'Ser-178' and 'Thr-507' and phosphorylation of CDC25C at 'Ser-216' creates binding sites for 14-3-3 proteins which inhibit CDC25A and CDC25C (PubMed:9278511). Phosphorylation of CDC25A at 'Ser-76', 'Ser-124', 'Ser-178', 'Ser-279' and 'Ser-293' promotes proteolysis of CDC25A (PubMed:9278511 , PubMed:12676583 , PubMed:14681206 , PubMed:12676925 , PubMed:12759351 , PubMed:19734889). Phosphorylation of CDC25A at 'Ser-76' primes the protein for subsequent phosphorylation at 'Ser-79', 'Ser-82' and 'Ser-88' by NEK11, which is required for polyubiquitination and degradation of CDC25A (PubMed:9278511 , PubMed:19734889 , PubMed:20090422). Inhibition of CDC25 leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression (PubMed:9278511). Also phosphorylates NEK6 (PubMed:18728393). Binds to and phosphorylates RAD51 at 'Thr-309', which promotes the release of RAD51 from BRCA2 and enhances the association of RAD51 with chromatin, thereby promoting DNA repair by homologous recombination (PubMed:15665856). Phosphorylates multiple sites within the C-terminus of TP53, which promotes activation of TP53 by acetylation and promotes cell cycle arrest and suppression of cellular proliferation (PubMed:<a

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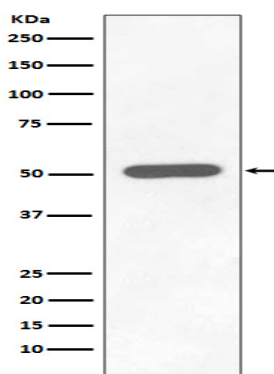


[10673501](http://www.uniprot.org/citations/10673501) , PubMed: 15659650 , PubMed: 16511572). Also promotes repair of DNA cross-links through phosphorylation of FANCE (PubMed: 17296736). Binds to and phosphorylates TLK1 at 'Ser-743', which prevents the TLK1-dependent phosphorylation of the chromatin assembly factor ASF1A (PubMed: 12660173 , PubMed: 12955071). This may enhance chromatin assembly both in the presence or absence of DNA damage (PubMed: 12660173 , PubMed: 12955071). May also play a role in replication fork maintenance through regulation of PCNA (PubMed: 18451105). May regulate the transcription of genes that regulate cell-cycle progression through the phosphorylation of histones (By similarity). Phosphorylates histone H3.1 (to form H3T11ph), which leads to epigenetic inhibition of a subset of genes (By similarity). May also phosphorylate RB1 to promote its interaction with the E2F family of transcription factors and subsequent cell cycle arrest (PubMed: 17380128). Phosphorylates SPRTN, promoting SPRTN recruitment to chromatin (PubMed: 31316063). Reduces replication stress and activates the G2/M checkpoint, by phosphorylating and inactivating PABIR1/FAM122A and promoting the serine/threonine-protein phosphatase 2A-mediated dephosphorylation and stabilization of WEE1 levels and activity (PubMed: 33108758).

研究领域 (Research Area)

Epigenetics and Nuclear Signaling

图片 (Image Data)



Western blot analysis of Phospho-Chk1 (S296) expression in HEK293 cell lysate Treated with Calyculin.

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注意事项 (Note)

For research use only .