

产品名称: Chk1 (10U9) Rabbit Monoclonal Antibody
产品货号: AMRe08761



产品概述 (Summary)

产品名称 (Production Name)	Chk1 (10U9) Rabbit Monoclonal Antibody
描述 (Description)	Recombinant rabbit monoclonal antibody
宿主 (Host)	Rabbit
应用 (Application)	WB,IHC,ICC/IF,FC,IF-P
种属反应性 (Reactivity)	Human

产品性能 (Performance)

偶联物 (Conjugation)	Unconjugated
修饰 (Modification)	Unmodified
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)	Serine/threonine-protein kinase Chk1; CHEK1; 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 1:1000-1:2000,IHC 1:50-1:200,ICC/IF 1:20-1:50,FC 1:50-1:200,IF-P 1:50-1:200
蛋白分子量 (Molecular Weight)	54kDa

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研究背景 (Background)

DNA damage induced protein phosphorylation; regulation of mitotic centrosome separation; regulation of S phase; peptidyl-threonine phosphorylation; DNA repair; chromatin-mediated maintenance of transcription; negative regulation of mitosis; 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, PubMed:12446774, PubMed:12399544, PubMed:14559997, PubMed:14988723, PubMed:15311285, PubMed:15665856, PubMed:15650047, PubMed:32357935). May also negatively regulate cell cycle progression during unperturbed cell cycles (PubMed:11535615, PubMed:12446774, PubMed:12399544, PubMed:14559997, PubMed:14988723, PubMed:15311285, PubMed:15665856, PubMed:15650047). This regulation is achieved by a number of mechanisms that together help to preserve the integrity of the genome (PubMed:11535615, PubMed:12446774, PubMed:12399544, PubMed:14559997, PubMed:14988723, PubMed:15311285, PubMed:15665856, PubMed:15650047). Recognizes the substrate consensus sequence [R-X-X- S/T] (PubMed:11535615, PubMed:12446774, PubMed:12399544, PubMed:14559997, PubMed:14988723, PubMed:15311285, PubMed:15665856, PubMed:15650047).

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[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)). Binds to and phosphorylates CDC25A, CDC25B and CDC25C (PubMed: [9278511](http://www.uniprot.org/citations/9278511) PubMed: [12676583](http://www.uniprot.org/citations/12676583) PubMed: [14681206](http://www.uniprot.org/citations/14681206) PubMed: [12676925](http://www.uniprot.org/citations/12676925) PubMed: [12759351](http://www.uniprot.org/citations/12759351) PubMed: [19734889](http://www.uniprot.org/citations/19734889) PubMed: [14559997](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/9278511)). Phosphorylation of CDC25A at 'Ser-76', 'Ser-124', 'Ser-178', 'Ser-279' and 'Ser-293' promotes proteolysis of CDC25A (PubMed: [9278511](http://www.uniprot.org/citations/9278511) PubMed: [12676583](http://www.uniprot.org/citations/12676583) PubMed: [14681206](http://www.uniprot.org/citations/14681206) PubMed: [12676925](http://www.uniprot.org/citations/12676925) PubMed: [12759351](http://www.uniprot.org/citations/12759351) PubMed: [19734889](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/9278511) PubMed: [19734889](http://www.uniprot.org/citations/19734889) PubMed: [20090422](http://www.uniprot.org/citations/20090422) PubMed: [20090422](http://www.uniprot.org/citations/20090422)). Inhibition of CDC25 leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression (PubMed: [9278511](http://www.uniprot.org/citations/9278511) PubMed: [9278511](http://www.uniprot.org/citations/9278511)). Also phosphorylates NEK6 (PubMed: [18728393](http://www.uniprot.org/citations/18728393) PubMed: [18728393](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/15665856) PubMed: [15665856](http://www.uniprot.org/citations/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: [10673501](http://www.uniprot.org/citations/10673501) PubMed: [15659650](http://www.uniprot.org/citations/15659650) PubMed: [16511572](http://www.uniprot.org/citations/16511572) PubMed: [16511572](http://www.uniprot.org/citations/16511572)). Also promotes repair of DNA cross-links through phosphorylation of FANCE (PubMed: [17296736](http://www.uniprot.org/citations/17296736) PubMed: [17296736](http://www.uniprot.org/citations/17296736)).

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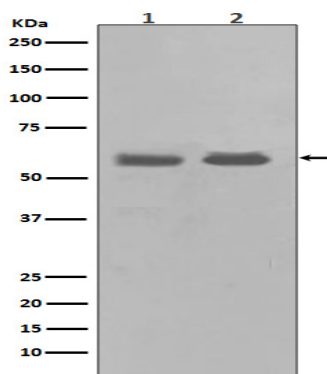


target="_blank">17296736). Binds to and phosphorylates TLK1 at 'Ser-743', which prevents the TLK1-dependent phosphorylation of the chromatin assembly factor ASF1A (PubMed:12660173, PubMed:12955071). This may enhance chromatin assembly both in the presence or absence of DNA damage (PubMed:12660173, PubMed:12955071). 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 Chk1 in (1) K562 cell lysate; (2) PC-12 cell lysate.

注意事项 (Note)

For research use only .