Datasheet for ABIN2857048

anti-CHEK1 antibody (pSer345)

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Overview

Quantity:	100 µL
Target:	CHEK1
Binding Specificity:	pSer345
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CHEK1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunocytochemistry (ICC)

Product Details

Immunogen:	Carrier-protein conjugated synthetic peptide surrounding phospho Ser345 of human Chk1. The exact sequence is proprietary.
Isotype:	IgG
Cross-Reactivity:	Human, Mouse
Characteristics:	Rabbit Polyclonal antibody to Chk1 (phospho Ser345) (CHK1 checkpoint homolog (S. pombe)) Chk1 (phospho Ser345) antibody [C1C2], Internal
Purification:	Purified by antigen-affinity chromatography.

Target Details

Target:	CHEK1

Target Details

Alternative Name:	checkpoint kinase 1 (CHEK1 Products)
Background:	Required for checkpoint mediated cell cycle arrest in response to DNA damage or the presence of unreplicated DNA. May also negatively regulate cell cycle progression during unperturbed cell cycles. Recognizes the substrate consensus sequence [R-X-X-S/T]. Binds to and phosphorylates CDC25A, CDC25B and CDC25C. 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. Phosphorylation of CDC25A at 'Ser-76', 'Ser-124', 'Ser-178', 'Ser-279' and 'Ser-293' promotes proteolysis of CDC25A. Inhibition of CDC25 activity leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression. Binds to and phosphorylates RAD51 at 'Thr-309', which may enhance the association of RAD51 with chromatin and promote DNA repair by homologous recombination. Binds to and phosphorylates TLK1 at 'Ser-743', which prevents the TLK1-dependent phosphorylation of the chromatin assembly factor ASF1A. This may affect chromatin assembly during S phase or DNA repair. May also phosphorylate multiple sites within the C-terminus of TP53, which promotes activation of TP53 by acetylation and enhances suppression of cellular proliferation. Cellular Localization: Nucleus , Cytoplasm
Molecular Weight:	54 kDa
Gene ID:	1111
UniProt:	O14757
Pathways:	p53 Signaling, Apoptosis, Cell Division Cycle, DNA Damage Repair

Application Details

Application Notes:	WB: 1:500-1:3000. ICC/IF: 1:100-1:1000. IHC-P: 1:100-1:1000. Optimal dilutions/concentrations should be determined by the researcher. Not tested in other applications.
Comment:	Positive Control: HCT116 cells with 30uM cisplatin treatment for 24hr , HCT116 P53 cell Validation: Orthogonal
Restrictions:	For Research Use only

Handling

Format:	Liquid

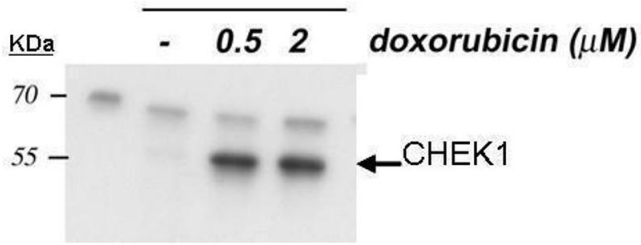
Handling

Concentration:	1.66 mg/mL
Buffer:	1XPBS (pH 7), 1 % BSA, 20 % Glycerol, 0.025 % ProClin 300
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store as concentrated solution. Centrifuge briefly prior to opening vial. For short-term storage (1-2 weeks), store at 4°C. For long-term storage, aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles.

Publications

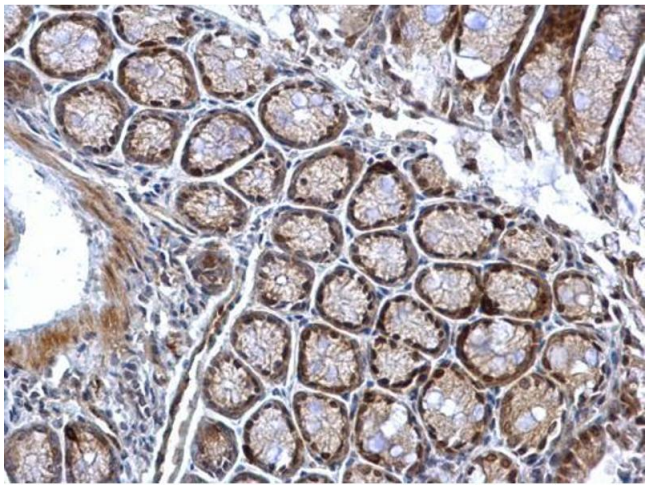
Product cited in:	Xu, Zhou, Xiong, Zou, Deng, Ganaie, Kleiboeker, Peng, Liu, Wang, Ye, Qiu: "Parvovirus B19 NS1 protein induces cell cycle arrest at G2-phase by activating the ATR-CDC25C-CDK1 pathway." in: **PLoS pathogens**, Vol. 13, Issue 3, pp. e1006266, (2017) (PubMed).

Images



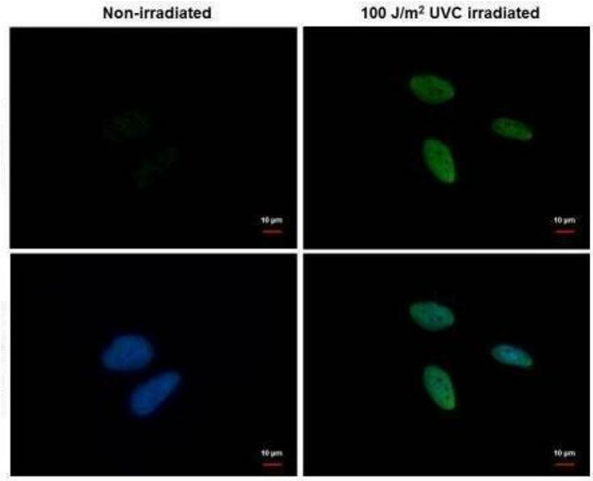
Western Blotting

Image 1. WB Image Sample: 20 ug of HCT116 P53 whole cell lysate 10% SDS PAGE Chk1-phopho-S345 antibody antibody diluted at 1:1000



Immunohistochemistry

Image 2. IHC-P Image Chk1 (phospho Ser345) antibody [C1C2], Internal detects Chk1 (phospho Ser345) protein at nucleus on mouse colon by immunohistochemical analysis. Sample: Paraffin-embedded mouse colon. Chk1 (phospho Ser345) antibody [C1C2], Internal , dilution: 1:500.



Immunofluorescence

Image 3. ICC/IF Image Chk1 (phospho Ser345) antibody [C1C2], Internal detects Chk1 (phospho Ser345) protein at nucleus by immunofluorescent analysis. Samples: HeLa cells mock (left) and UVC treated with 100J/m2 and recover for 8hr (right) were fixed in 4% paraformaldehyde at RT for 15 min. Green: CHK1 (phospho Ser345) protein stained by Chk1 (phospho Ser345) antibody [C1C2], Internal , diluted at 1:500. Blue: Hoechst 33342 staining.

Please check the product details page for more images. Overall 4 images are available for ABIN2857048.