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Datasheet for ABIN757072

anti-CHEK1 antibody (pSer317)

2 Images

1 Publication

Overview

Quantity:	100 µL
Target:	CHEK1
Binding Specificity:	pSer317
Reactivity:	Mouse, Chicken
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CHEK1 antibody is un-conjugated
Application:	ELISA, Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunocytochemistry (ICC), Immunofluorescence (Cultured Cells) (IF (cc)), Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	KLH conjugated synthetic phosphopeptide derived from human CHEK1 around the phosphorylation site of Ser317
Isotype:	IgG
Specificity:	This phosphorylation site is homologous to that of Ser317 in Mouse and Rat.
Cross-Reactivity:	Chicken, Mouse
Predicted Reactivity:	Human,Rat,Pig,Horse,Rabbit
Purification:	Purified by Protein A.

Target Details

Target: CHEK1

Alternative Name: CHEK1 ([CHEK1 Products](#))

Background: Synonyms: CHK1, Serine/threonine-protein kinase Chk1, CHK1 checkpoint homolog, Cell cycle checkpoint kinase, Checkpoint kinase-1, CHEK1

Background: 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. May also negatively regulate cell cycle progression during unperturbed cell cycles. This regulation is achieved by a number of mechanisms that together help to preserve the integrity of the genome. 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. 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. Inhibition of CDC25 leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression. Also phosphorylates NEK6. 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. 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. Also promotes repair of DNA cross-links through phosphorylation of FANCE. Binds to and phosphorylates TLK1 at 'Ser-743', which prevents the TLK1-dependent phosphorylation of the chromatin assembly factor ASF1A. This may enhance chromatin assembly both in the presence or absence of DNA damage. May also play a role in replication fork maintenance through regulation of PCNA.

Gene ID: 1111

UniProt: [014757](#)

Pathways: [p53 Signaling](#), [Apoptosis](#), [Cell Division Cycle](#), [DNA Damage Repair](#)

Application Details

Application Notes: ELISA 1:500-1000

IHC-P 1:200-400

Application Details

IHC-F 1:100-500
IF(IHC-P) 1:50-200
IF(IHC-F) 1:50-200
IF(ICC) 1:50-200
ICC 1:100-500

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 1 µg/µL

Buffer: 0.01M TBS(pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.

Preservative: ProClin

Precaution of Use: This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.

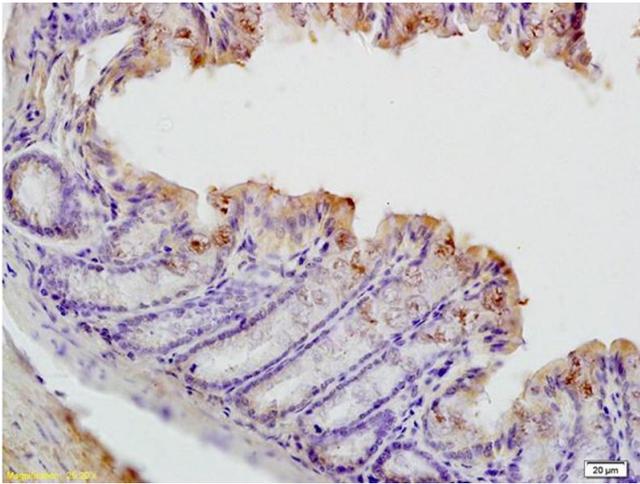
Storage: 4 °C, -20 °C

Storage Comment: Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Expiry Date: 12 months

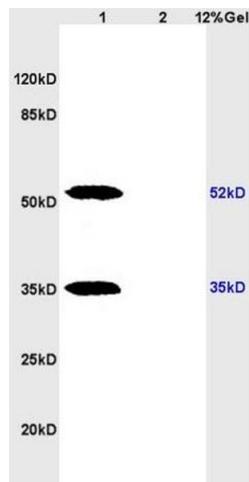
Publications

Product cited in: Guo, Cui, Peng, Fang, Zuo, Deng, Wang, Wu, Chen, Deng: "Dietary NiCl₂ causes G₂/M cell cycle arrest in the broiler's kidney." in: **Oncotarget**, Vol. 6, Issue 34, pp. 35964-77, (2015) ([PubMed](#)).



Immunohistochemistry

Image 1. Formalin-fixed and paraffin embedded mouse small intestine tissue labeled with Anti-phospho-CHEK1(Ser317) Polyclonal Antibody, Unconjugated (ABIN757072) at 1:200 followed by conjugation to the secondary antibody and DAB staining



SDS-PAGE

Image 2. Lane 1: rat brain lysates Lane 2: rat heart lysates probed with Anti phospho-CHEK1(Ser317) Polyclonal Antibody, Unconjugated (ABIN757072) at 1:200 in 4 °C. Followed by conjugation to secondary antibody at 1:3000 90min in 37 °C. Predicted band 40kD. Observed band size: 35kD, 52kD.