Datasheet for ABIN6260808

anti-CHEK1 antibody (Internal Region)

3 Images | 1 Publication

Go to Product page

Overview

Quantity:	100 µL
Target:	CHEK1
Binding Specificity:	Internal Region
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CHEK1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunofluorescence (IF), Immunocytochemistry (ICC)

Product Details

Immunogen:	A synthesized peptide derived from human Chk1, corresponding to a region within the internal amino acids.
Isotype:	IgG
Specificity:	Chk1 Antibody detects endogenous levels of total Chk1.
Predicted Reactivity:	Pig,Zebrafish,Bovine,Horse,Sheep,Rabbit,Dog,Chicken
Purification:	The antiserum was purified by peptide affinity chromatography using SulfoLink™ Coupling Resin (Thermo Fisher Scientific).

Target Details

Target:	CHEK1

Target Details

Alternative Name:	CHEK1 (CHEK1 Products)
Background:	Description: 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 CDCD25A. 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. May regulate the transcription of genes that regulate cell-cycle progression through the phosphorylation of histones. Phosphorylates histone H3.1 (to form H3T11ph), which leads to epigenetic inhibition of a subset of genes. May also phosphorylate RB1 to promote its interaction with the E2F family of transcription factors and subsequent cell cycle arrest. Gene: CHEK1
Molecular Weight:	56kDa
Gene ID:	1111
UniProt:	O14757
Pathways:	p53 Signaling, Apoptosis, Cell Division Cycle, DNA Damage Repair

Application Details

Application Notes:	WB 1:500-1:2000, IHC 1:50-1:200, IF/ICC 1:200, ELISA(peptide) 1:20000-1:40000
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	Rabbit IgG in phosphate buffered saline , pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store at -20 °C. Stable for 12 months from date of receipt.
Expiry Date:	12 months

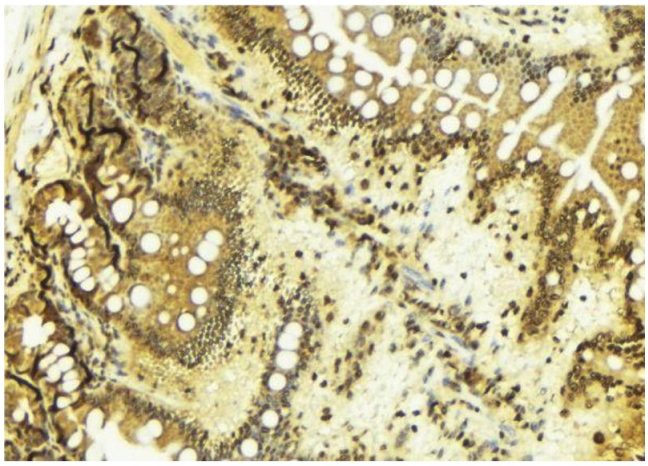
Publications

Product cited in:	Liao, Xiao, Chen, Zhang, Chen, Long, Gao, He, Ge, Yi, Wu, Li, Zhou: "The receptor for activated protein kinase C promotes cell growth, invasion and migration in cervical cancer." in: **International journal of oncology**, Vol. 51, Issue 5, pp. 1497-1507, (2018) (PubMed). Huang, Song, Tao, Shao, Zeng, Xu, Qi, Sun: "Ovostatin 2 knockdown significantly inhibits the growth, migration, and tumorigenicity of cutaneous malignant melanoma cells." in: **PLoS ONE**, Vol. 13, Issue 4, pp. e0195610, (2018) (PubMed). Liao, Xiao, Chen, Zhang, Chen, Long, Gao, Zhu, He, Peng, Xiong, Zeng, Li, Zhou, Li, Ma, Wu, Xiang, Li, Zhou: "CD38 enhances the proliferation and inhibits the apoptosis of cervical cancer cells by affecting the mitochondria functions." in: **Molecular carcinogenesis**, Vol. 56, Issue 10, pp. 2245-2257, (2017) (PubMed). Chen, Suo, Cheng, Zheng, Xu: "Vascular endothelial growth factor C enhances cervical cancer migration and invasion via activation of focal adhesion kinase." in: **Gynecological endocrinology : the official journal of the International Society of Gynecological**

Publications

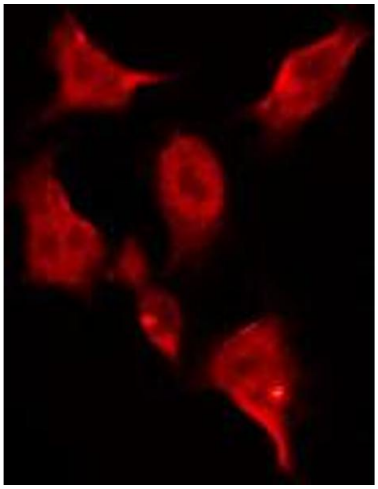
Endocrinology, Vol. 29, Issue 1, pp. 20-4, (2013) (PubMed).

Images



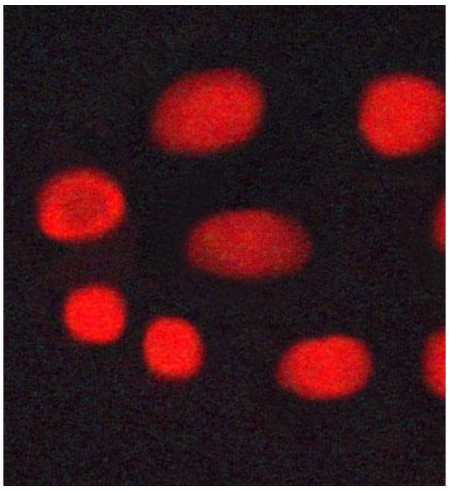
Immunohistochemistry

Image 1. ABIN6269045 at 1/100 staining Mouse colon tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



Immunofluorescence (fixed cells)

Image 2. ABIN6269045 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25°C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37°C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



Immunofluorescence (fixed cells)

Image 3. ABIN6269045 staining MCF-7 cells by ICC/IF. Cells were fixed with PFA and permeabilized in 0.1% saponin prior to blocking in 10% serum for 45 minutes at 37°C. The primary antibody was diluted 1/400 and incubated with the sample for 1 hour at 37°C. A Alexa Fluor® 594 conjugated goat polyclonal to rabbit IgG (H+L), diluted 1/600 was used as secondary antibody.