

Datasheet for ABIN6256251
anti-CHEK1 antibody (pSer296)

12 Images

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Overview

| | |
|----------------------|--|
| Quantity: | 100 µL |
| Target: | CHEK1 |
| Binding Specificity: | pSer296 |
| 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 around the phosphorylation site of Ser296. |
| Isotype: | IgG |
| Specificity: | Phospho-Chk1 (Ser296) Antibody detects endogenous levels of Chk1 only when phosphorylated at Serine 296. |
| Predicted Reactivity: | Pig,Bovine,Horse,Sheep,Rabbit,Dog |
| Purification: | The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns. |

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 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. 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: 45kDa

Gene ID: 1111

UniProt: [014757](#)

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

Application Details

Application Notes: WB 1:500-1:2000, IHC 1:50-1:500, IF/ICC 1:100-1:500, 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

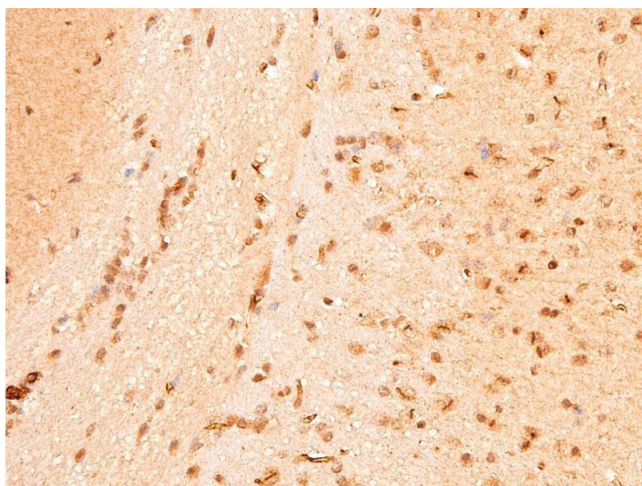
Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C

Storage Comment: Store at -20 °C. Stable for 12 months from date of receipt.

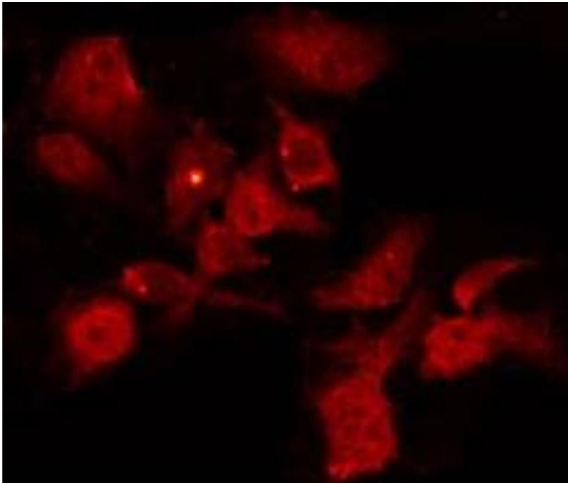
Expiry Date: 12 months

Images



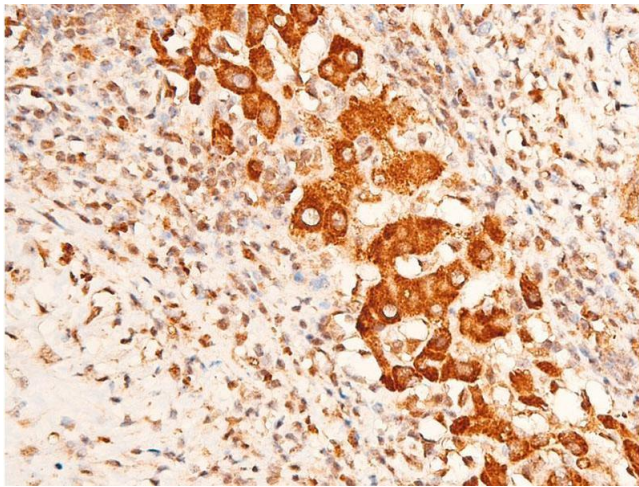
Immunohistochemistry

Image 1. ABIN6267221 at 1/100 staining mouse brain tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue 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. ABIN6267221 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.



Immunohistochemistry

Image 3. ABIN6267221 at 1/100 staining human lung cancer tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue 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.

Please check the [product details page](#) for more images. Overall 12 images are available for ABIN6256251.