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Datasheet for ABIN685867

anti-CHEK2 antibody (AA 101-250)

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Overview

Quantity:	100 µL
Target:	CHEK2
Binding Specificity:	AA 101-250
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CHEK2 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunofluorescence (Cultured Cells) (IF (cc)), Flow Cytometry (FACS), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	KLH conjugated synthetic peptide derived from human CHK2
Isotype:	IgG
Cross-Reactivity:	Human, Mouse
Predicted Reactivity:	Rat,Dog,Cow,Horse,Rabbit
Purification:	Purified by Protein A.

Target Details

Target:	CHEK2
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Target Details

Alternative Name: [CHK2 \(CHEK2 Products\)](#)

Background: Synonyms: CDS1, CHK2, LFS2, RAD53, hCds1, HuCds1, PP1425, Serine/threonine-protein kinase Chk2, CHK2 checkpoint homolog, Cds1 homolog, Checkpoint kinase 2, CHEK2

Background: Serine/threonine-protein kinase which is required for checkpoint-mediated cell cycle arrest, activation of DNA repair and apoptosis in response to the presence of DNA double-strand breaks. May also negatively regulate cell cycle progression during unperturbed cell cycles. Following activation, phosphorylates numerous effectors preferentially at the consensus sequence [L-X-R-X-X-S/T]. Regulates cell cycle checkpoint arrest through phosphorylation of CDC25A, CDC25B and CDC25C, inhibiting their activity. Inhibition of CDC25 phosphatase activity leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression. May also phosphorylate NEK6 which is involved in G2/M cell cycle arrest. Regulates DNA repair through phosphorylation of BRCA2, enhancing the association of RAD51 with chromatin which promotes DNA repair by homologous recombination. Also stimulates the transcription of genes involved in DNA repair (including BRCA2) through the phosphorylation and activation of the transcription factor FOXM1. Regulates apoptosis through the phosphorylation of p53/TP53, MDM4 and PML. Phosphorylation of p53/TP53 at 'Ser-20' by CHEK2 may alleviate inhibition by MDM2, leading to accumulation of active p53/TP53. Phosphorylation of MDM4 may also reduce degradation of p53/TP53. Also controls the transcription of pro-apoptotic genes through phosphorylation of the transcription factor E2F1. Tumor suppressor, it may also have a DNA damage-independent function in mitotic spindle assembly by phosphorylating BRCA1. Its absence may be a cause of the chromosomal instability observed in some cancer cells.

Gene ID: 11200

UniProt: [O96017](#)

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

Application Details

Application Notes: WB 1:300-5000
ELISA 1:500-1000
FCM 1:20-100
IHC-P 1:200-400
IHC-F 1:100-500
IF(IHC-P) 1:50-200
IF(IHC-F) 1:50-200

Application Details

IF(ICC) 1:50-200

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.

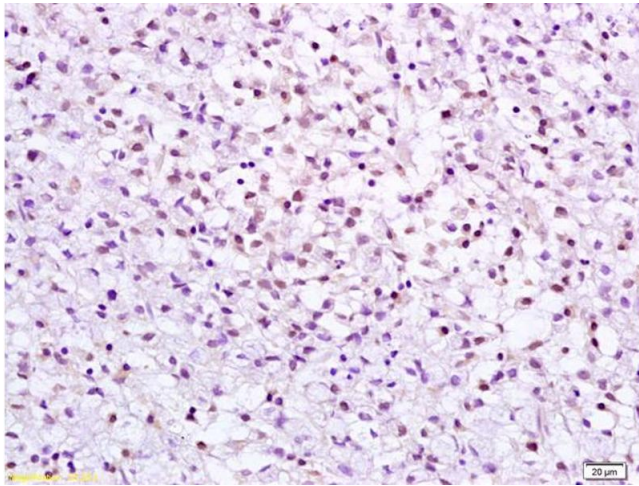
Expiry Date: 12 months

Publications

Product cited in: Liu, Yang, Jing, Ren, Wei, Zhang, Zhang, Duan, Zhou, Sun: "Silica nanoparticle exposure inducing granulosa cell apoptosis and follicular atresia in female Balb/c mice." in: **Environmental science and pollution research international**, Vol. 25, Issue 4, pp. 3423-3434, (2018) ([PubMed](#)).

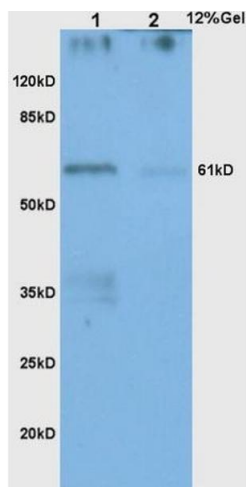
Wei, Zhang, Ren, Zhang, Liu, Duan, Yu, Li, Peng, Zhou, Sun: "Endosulfan induces cell dysfunction through cycle arrest resulting from DNA damage and DNA damage response signaling pathways." in: **The Science of the total environment**, Vol. 589, pp. 97-106, (2017) ([PubMed](#)).

Wang, Wang, Liu, Dong, Hu, Miao, Li, Liu, Zhou, Zhang, Ma, Luo: "ATM Signaling Pathway Is Implicated in the SMYD3-mediated Proliferation and Migration of Gastric Cancer Cells." in: **Journal of gastric cancer**, Vol. 17, Issue 4, pp. 295-305, (2017) ([PubMed](#)).



Immunohistochemistry

Image 1. Formalin-fixed and paraffin embedded human gastric carcinoma labeled with Anti CHK2 Polyclonal Antibody, Unconjugated (ABIN685867) at 1:200 followed by conjugation to the secondary antibody and DAB staining



SDS-PAGE

Image 2. L1 human colon carcinoma lysates L2 human gastric carcinoma lysates probed with Anti CHK2 Polyclonal Antibody, Unconjugated (ABIN685867) at 1:200 in 4 °C. Followed by conjugation to secondary antibody at 1:3000 90min in 37 °C. Predicted band 61kD. Observed band size: 61kD