Datasheet for ABIN703165

anti-CHEK2 antibody (pThr68)

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Overview

Quantity:	100 µL
Target:	CHEK2
Binding Specificity:	pThr68
Reactivity:	Human, Mouse, Rat, Chicken
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)), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	KLH conjugated synthetic phosphopeptide derived from human CHK2 around the phosphorylation site of Thr68
Isotype:	IgG
Cross-Reactivity:	Chicken, Human, Mouse, Rat
Predicted Reactivity:	Dog,Cow,Pig,Horse
Purification:	Purified by Protein A.

Target Details

Target:	CHEK2

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
	IHC-P 1:200-400
	IHC-F 1:100-500
	IF(IHC-P) 1:50-200
	IF(IHC-F) 1:50-200
	IF(ICC) 1:50-200

Application Details

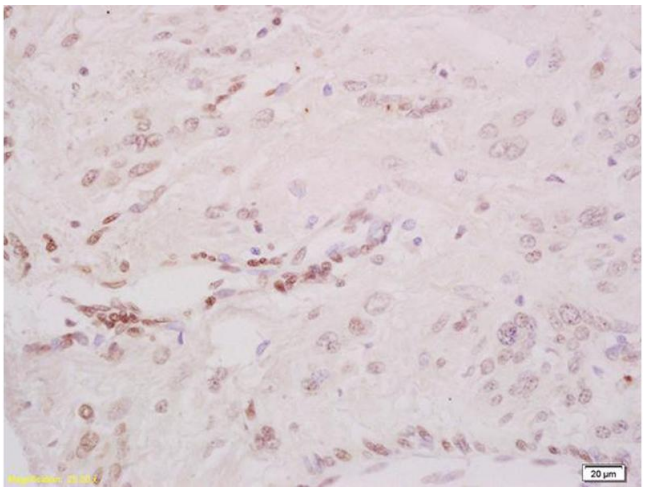
Restrictions:	For Research Use only

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

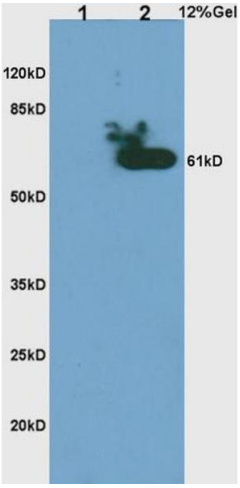
Publications

Product cited in:	Yin, Jiang, Peng, Cui, Zhou, He, Zuo, Ouyang, Fan, Fang: "The molecular mechanism of G2M cell cycle arrest induced by AFB1 in the jejunum." in: **Oncotarget**, Vol. 7, Issue 24, pp. 35592-35606, (2016) (PubMed). Guo, Cui, Peng, Fang, Zuo, Deng, Wang, Wu, Chen, Deng: "Dietary NiCl□ causes G□/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 human cervical carcinoma labeled with Anti-Phospho-CHK2 (Thr68) Polyclonal Antibody, Unconjugated (ABIN703165) at 1:200 followed by conjugation to the secondary antibody and DAB staining



SDS-PAGE

Image 2. L1 rat brain lysates, L2 human colon carcinoma lysates probed with Anti- Phospho-CHK2(Thr68) Polyclonal Antibody, Unconjugated (ABIN703165) at 1:200 in 4 °C. Followed by conjugation to secondary antibody at 1:3000 90min in 37 °C. Predicted band size: 61kD Observed band size:61kD.

