Datasheet for ABIN4908003

anti-CHEK1 antibody

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Overview

Quantity:	100 µL
Target:	CHEK1
Reactivity:	Human, Mouse
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CHEK1 antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Immunogen:	This monoclonal antibody is generated from mice immunized with Ni-NTA purified recombinant protein CHK1 expressed in E. Coli strain M15.
Clone:	2G1D5
Isotype:	IgM
Cross-Reactivity:	Human, Mouse
Purification:	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, eluted with high and low pH buffers and neutralized immediately, followed by dialysis against PBS.

Target Details

Target:	CHEK1
Alternative Name:	CHK1 (CHEK1 Products)

Target Details

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 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.
Gene ID:	1111
UniProt:	O14757
Pathways:	p53 Signaling, Apoptosis, Cell Division Cycle, DNA Damage Repair

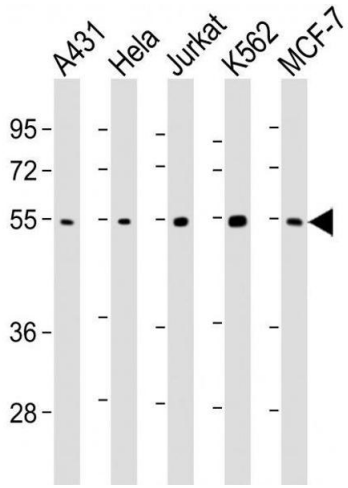
Application Details

Application Notes:	WB 1:300-5000
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.5 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:	-20 °C
Storage Comment:	Store at -20°C for 12 months.
Expiry Date:	12 months

Images



Western Blotting

Image 1. Lane 1: A431, Lane 2: HeLa, Lane 3: Jurkat, Lane 4: K562, Lane 5: MCF-7 cell lysates at 20ug per lane, probed with bsm-51266M CHK1 (2G1D5) Monoclonal Antibody at 1:1000 overnight at 4°C followed by a conjugated secondary antibody for 60 minutes at 37°C.