

#11140

Chk1 (Phospho-Ser280) Antibody

Catalog: #11140-1 50µl **Orders:** order@signalwayantibody.com
#11140-2 100µl **Support:** tech@signalwayantibody.com
Storage: Store at -20°C/1 year **Web:** www.signalwayantibody.com



Application	Species Reactivity	Source	Molecular Wt.
WB	Human	Rabbit Polyconal Ab	56KD

Description: Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatography using non-phosphopeptide.

Specificity: The antibody detects endogenous level of Chk1 only when phosphorylated at serine 280.

Immunogen: Peptide sequence around phosphorylation site of serine 280 (V-T-S(p)-G-G) derived from Human Chk1.

Formulation: Supplied at 1.0mg/mL in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.

Synonyms: CHEK1 Chk1

Accession No.: Swiss-Prot#: O14757 NCBI Gene#: 1111
NCBI Protein#: NP_001107593.1

Background: Required for checkpoint mediated cell cycle arrest in response to DNA damage or the presence of unreplicated DNA. May also negatively regulate cell cycle progression during unperturbed cell cycles. 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. Inhibition of CDC25 activity leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression. Binds to and phosphorylates RAD51 at 'Thr-309', which may enhance the association of RAD51 with chromatin and promote DNA repair by homologous recombination. Binds to and phosphorylates TLK1 at 'Ser-743', which prevents the TLK1-dependent phosphorylation of the chromatin assembly factor ASF1A. This may affect chromatin assembly during S phase or DNA repair. May also phosphorylate multiple sites within the C-terminus of TP53, which promotes activation of TP53 by acetylation and enhances suppression of cellular proliferation.

References:

Conn CW, et al. (2004)Dev Cell; 7(2): 275-81
King FW, et al. (2004)Cell Cycle; 3(5): 634-7
Shtivelman E, et al. (2002) Curr Biol; 12(11): 919-24

Citation:

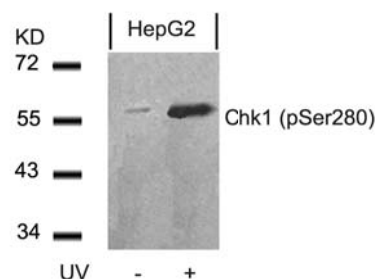
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Related Pathway: CellCycle, Kinase/Phosphatases

Note: For western blotting, incubate membrane with diluted antibody in 5% nonfat milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Recommended Dilutions:

Western blotting 1:500~1:1000



Western blot analysis of extracts from HepG2 cells untreated or treated with UV using Chk1 (Phospho-Ser280) Antibody #11140.