

35-1135: Polyclonal Antibody to Chk1 (Phospho-Ser280)

Clonality :	Polyclonal
Application :	WB
Reactivity :	Human
Gene :	CHEK1
Gene ID :	1111
Uniprot ID :	O14757
Format :	Purified
Alternative Name :	CHEK1, Chk1
Isotype :	Rabbit IgG
Immunogen Information :	Peptide sequence around phosphorylation site of serine 280 (V-T-S(p)-G-G) derived from Human Chk1.

Description

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. 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

Product Info

Amount :	50 µl / 100 µl
Content :	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage condition :	Store the antibody at 4°C, stable for 6 months. For long-term storage, store at -20°C. Avoid repeated freeze and thaw cycles.

Application Note

Predicted MW: 56kd, Western blotting: 1:500~1:1000

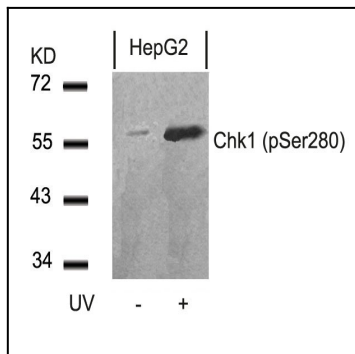


Figure 1: Western blot analysis of extracts from HepG2 cells untreated or treated with UV using Chk1(Phospho-Ser280) Antibody 35-1135 .

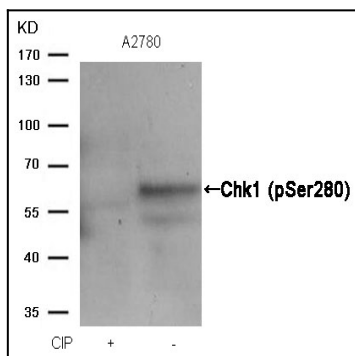


Figure 2: Western blot analysis of extracts from A2780 cells, treated with calf intestinal phosphatase (CIP), using Chk1 (Phospho-Ser280) Antibody 35-1135 .