Product Datasheet

Chk1 (Phospho-Ser286) Antibody

Catalog No: #11987

Package Size: #11987-1 50ul #11987-2 100ul

Orders: order@signalwayantibody.com
Support: tech@signalwayantibody.com

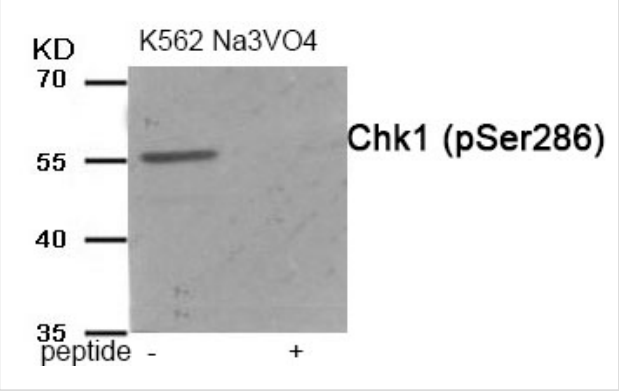
Description

Product Name	Chk1 (Phospho-Ser286) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Applications	WB;IF;ELISA
Species Reactivity	Human;Mouse;Rat
Specificity	Phospho-Chk1 (S286) Polyclonal Antibody detects endogenous levels of Chk1 protein only when phosphorylated at S286.
Immunogen Type	Peptide-KLH
Immunogen Description	The antiserum was produced against synthesized peptide derived from human Chk1 around the phosphorylation site of Ser286. AA range:256-305
Target Name	Chk1
Modification	Phospho
Other Names	CHEK1; CHK1; CHK1 checkpoint homolog;
Accession No.	Swiss-Prot#: O14757; NCBI Gene#: 1111; NCBI Protein#: NP_001107593.1
Uniprot	O14757
GeneID	1111;
SDS-PAGE MW	55kd
Concentration	1.0mg/ml
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Storage	-15°C to -25°C/1 year(Do not lower than -25°C)

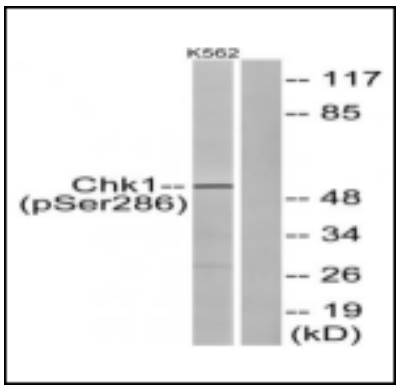
Application Details

WB 1:500 - 1:2000. IF 1:200 - 1:1000. ELISA: 1:5000. Not yet tested in other applications.

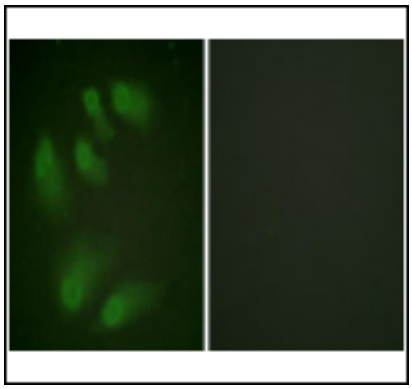
Images



Western blot analysis of extracts from K562 cells treated with Na3VO4 using Chk1 (Phospho-Ser286) antibody #11987.The lane on the right is treated with the antigen-specific peptide.



Immunofluorescence analysis of HeLa cells, using Chk1 (Phospho-Ser286) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from K562 cells treated with Na3VO4 0.3uM 40', using Chk1 (Phospho-Ser286) Antibody. The lane on the right is blocked with the phospho peptide.

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.

Enomoto M, et al. (2009)J Biol Chem 284, 34223-3

Ikegami Y, et al. (2008)Biochem Biophys Res Commun 377, 1227-31

Shiromizu T, et al. (2006)Genes Cells 11, 477-85

Note: This product is for in vitro research use only