Chk1 (Phospho-Ser301) Antibody

Catalog No: #11988

Package Size: #11988-1 50ul #11988-2 100ul

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

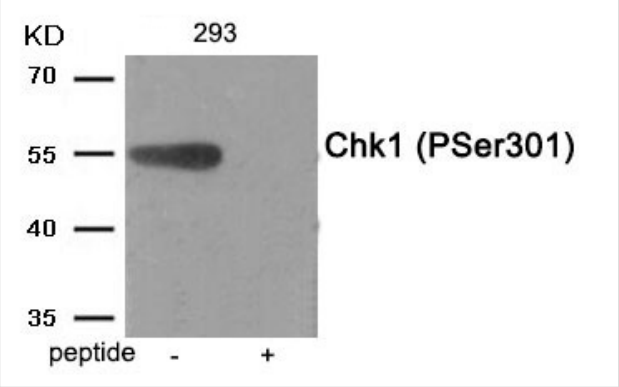
Description

Product Name	Chk1 (Phospho-Ser301) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	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 chromatogramphy using non-phosphopeptide.
Applications	WB
Species Reactivity	Hu
Specificity	The antibody detects endogenous level of Chk1 only when phosphorylated at serine 301.
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around phosphorylation site of serine 301 (D-F-S(p)-P-V) derived from Human Chk1.
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
SDS-PAGE MW	55kd
Concentration	1.0mg/ml
Formulation	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C/1 year

Application Details

Western blotting: 1:500~1:1000

Images



Western blot analysis of extracts from 293 tissue using Chk1 (Phospho-Ser301) antibody #11988.The lane on the right is treated with the antigen-specific 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