

## Anti-Phospho-CHEK1 (Ser296) Polyclonal Antibody

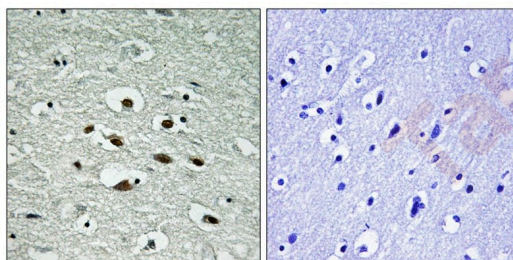
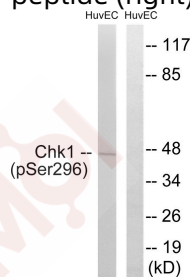
### Product Details

Ig Type:	IgG
Reactivity:	Human
Conjugation:	Unconjugated
Molecular Weight:	Actual: 45 kDa.
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 chromatography using non-phosphopeptide.

### Applications

#### Verified Activity:

1. Western blot analysis of extracts from HUVEC cells treated with UV using Chk1 (Phospho-Ser296) Antibody TMAC-00835. The lane on the right is treated with the antigen-specific peptide.
2. Immunohistochemical analysis of paraffin-embedded human brain tissue using Chk1 (Phospho-Ser296) antibody TMAC-00835 (left) or the same antibody preincubated with blocking peptide (right).



Application:	IHC,WB
Recommended	WB: 1:500-1000; IHC: 1:50-100

### Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

### Antigen Details

Immunogen:	Peptide sequence around phosphorylation site of Serine 296(I-Q-S(p)-N-L) derived from Human Chk1
Antigen Species:	Human
Uniprot ID:	O14757
Synonyms:	p-CHEK1 (S296);CHEK1 (p-Ser296);p-CHEK1 (Ser296);CHEK1 (p-S296)

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### Research 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.

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