

## Product datasheet for **AP55707PU-N**

### Chk1 (CHEK1) pSer296 Rabbit Polyclonal Antibody

#### Product data:

|                         |   |
|-------------------------|---|
| Product Type:           | Primary Antibodies  |
| Applications:           | IHC, WB   |
| Recommended Dilution:   | <b>Western blot:</b> 1:500~1:1000.<br><b>Immunohistochemistry on paraffin sections:</b> 1:50~1:100.   |
| Reactivity:             | Human   |
| Host:                   | Rabbit  |
| Clonality:              | Polyclonal  |
| Immunogen:              | Peptide sequence around phosphorylation site of Serine 296(I-F-S(p)-N-L) derived from Human Chk1 (KLH-conjugated)   |
| Specificity:            | The antibody detects endogenous levels of Chk1 only when phosphorylated at serine 296.  |
| Formulation:            | Rabbit IgG in phosphate buffered saline (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol<br>State: Aff - Purified<br>State: Liquid Ig fraction |
| Concentration:          | lot specific  |
| Purification:           | Affinity chromatography using epitope-specific peptide  |
| Conjugation:            | Unconjugated  |
| Storage:                | Upon receipt, store undiluted (in aliquots) at -20°C.<br>Avoid repeated freezing and thawing.   |
| Stability:              | Shelf life: one year from despatch.   |
| Predicted Protein Size: | 45 kDa  |
| Gene Name:              | checkpoint kinase 1   |
| Database Link:          | <a href="#">Entrez Gene 1111 Human O14757</a>   |



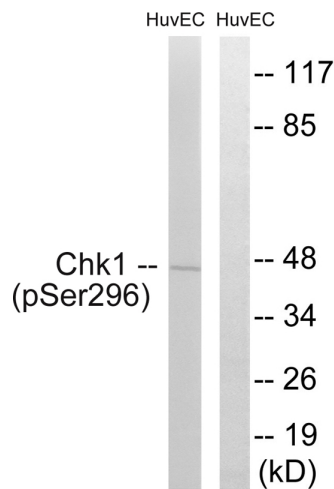
[View online »](#)

**Background:**

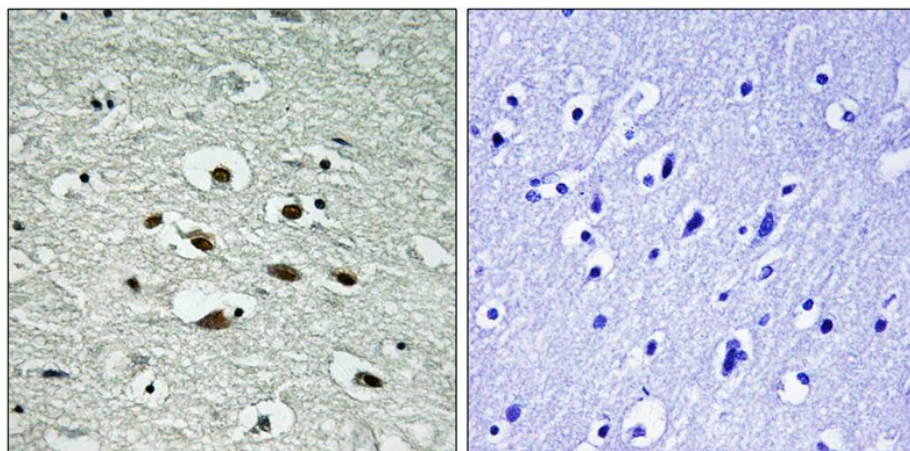
Required for checkpoint mediated cell cycle arrest in response to DNA damage or the presence of unreplicated DNA. May also negatively regulate cell cycle progression during unperturbed cell cycles. Recognizes the substrate consensus sequence [R-X-X-S/T]. Binds to and phosphorylates CDC25A, CDC25B and 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.

**Synonyms:**

CHEK1, CHEK-1

**Product images:**


Western blot analysis of extracts from HUVEC cells treated with UV using Chk1 (Phospho-Ser296) Antibody. The lane on the right is treated with the antigen-specific peptide.



Immunohistochemical analysis of paraffin-embedded human brain tissue using Chk1 (Phospho-Ser296) antibody (left) or the same antibody preincubated with blocking peptide (right).