

**CHK2, Active recombinant protein**  
**CHK, CHK2 checkpoint homolog**  
**Catalog # PBV11288r****Specification**

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**CHK2, Active recombinant protein - Product info**

Primary Accession	<a href="#">O96017</a>
Concentration	<b>0.1</b>
Calculated MW	<b>88.0 kDa KDa</b>

**CHK2, Active recombinant protein - Additional Info**

Gene ID	<b>11200</b>
Gene Symbol	<b>CHK2</b>
<b>Other Names</b>	
CHK, CHK2 checkpoint homolog	

Source	<b>Baculovirus (Sf9 insect cells)</b>
Assay&Purity	<b>SDS-PAGE; ≥90%</b>
Assay2&Purity2	<b>HPLC;</b>
Recombinant	<b>Yes</b>
<b>Format</b>	
Liquid	

**Storage**

-80°C; Recombinant proteins in storage buffer (50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1 mM EDTA, 0.1 mM PMSF, 25% glycerol).

**CHK2, Active recombinant protein - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**CHK2, Active recombinant protein - Images****CHK2, Active recombinant protein - Background**

Chk2 is the mammalian homolog of the *Saccharomyces cerevisiae* Rad53 and *Schizosaccharomyces pombe* Cds1 protein kinases required for the DNA damage and replication checkpoints. Chk2 is rapidly phosphorylated and activated in response to replication blocks and DNA damage; the response to DNA damage occurs in an ataxia telangiectasia mutated

(ATM)-dependent manner (1). In vitro, Chk2 phosphorylates p53 on Ser-20 and dissociated preformed complexes of p53 with Mdm2, a protein that targets p53 for degradation (2). In vivo, ectopic expression of wild-type Chk2 leads to increased p53 stabilization after DNA damage, whereas expression of a dominant-negative Chk2 mutant abrogated both phosphorylation of p53 on Ser-20 and p53 stabilization. Thus, in response to DNA damage, Chk2 stabilizes the p53 tumor suppressor protein leading to cell cycle arrest in G1. Chk2 is directly phosphorylated by ATM in response to ionizing radiation (3). The phosphorylation occurs in the Ser-Gln/Thr-Gln (SQ/TQ) cluster domain (SCD) on Chk2, which contains seven SQ/TQ motifs, and Thr68 is the major in vitro phosphorylation site by ATM.

#### **CHK2, Active recombinant protein - References**

Matsuoka S., et al. Science 282:1893-1897(1998).  
Blasina A., et al. Curr. Biol. 9:1-10(1999).  
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Staalesen V., et al. Oncogene 23:8535-8544(2004).  
Collins J.E., et al. Genome Biol. 5:R84.1-R84.11(2004).