abcam

Product datasheet

Anti-Chk2 (phospho T68) antibody ab3501

2 Abreviews 10 References 1 Image

Overview

Product name	Anti-Chk2 (phospho T68) antibody
Description	Rabbit polyclonal to Chk2 (phospho T68)
Host species	Rabbit
Specificity	ab3501 was tested using MCF7 cells treated with different amounts of doxorubicin (a DNA damaging agent). As the treatment increased the WB signal at 60kDa representing Chk2 increased, indicating that ab3501 was detecting the phosphorylated form of the protein. It has also been shown by peptide ELISA to be specific for the phosphorylated form of the immunizing peptide versus the non-phosphorylated form.
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Chimpanzee
Immunogen	Synthetic peptide corresponding to Chk2 aa 50-150 (phospho T68). Run BLAST with Run BLAST with
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 0.42% Potassium phosphate, 0.87% Sodium chloride
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab3501 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆ **(2)**	1/200 - 1/2000. Detects a band of approximately 61 kDa (predicted molecular weight: 61 kDa).

Target

Function Regulates cell cycle checkpoints and apoptosis in response to DNA damage, particularly to DNA double-strand breaks. Inhibits CDC25C phosphatase by phosphorylation on 'Ser-216', preventing the entry into mitosis. May also play a role in meiosis. Regulates the TP53 tumor suppressor through phosphorylation at 'Thr-18' and 'Ser-20'.

Tissue specificity High expression is found in testis, spleen, colon and peripheral blood leukocytes. Low expression is found in other tissues.

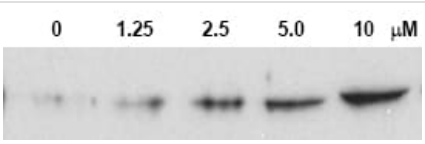
Involvement in disease Defects in CHEK2 are associated with Li-Fraumeni syndrome 2 (LFS2) [MIM:609265]; a highly penetrant familial cancer phenotype usually associated with inherited mutations in p53/TP53.
Defects in CHEK2 may be a cause of susceptibility to prostate cancer (PC) [MIM:176807]. It is a malignancy originating in tissues of the prostate. Most prostate cancers are adenocarcinomas that develop in the acini of the prostatic ducts. Other rare histopathologic types of prostate cancer that occur in approximately 5% of patients include small cell carcinoma, mucinous carcinoma, prostatic ductal carcinoma, transitional cell carcinoma, squamous cell carcinoma, basal cell carcinoma, adenoid cystic carcinoma (basaloid), signet-ring cell carcinoma and neuroendocrine carcinoma.
Defects in CHEK2 are found in some patients with osteogenic sarcoma (OSRC) [MIM:259500].

Sequence similarities Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CHK2 subfamily.
Contains 1 FHA domain.
Contains 1 protein kinase domain.

Post-translational modifications Phosphorylated by PLK4.

Cellular localization Nucleus; Nucleus. Isoform 10 is present throughout the cell and Nucleus > PML body. Nucleus > nucleoplasm. Recruited into PML bodies together with TP53.

Images



Western blot - Anti-Chk2 (phospho T68) antibody (ab3501)

The Western blot shows lysates from MCF-7 cells treated for 24 hours with increasing concentrations of the DNA damaging agent Doxorubicin (0-10µM). The blot clearly shows that Chk2 phosphorylation is increased with the higher concentrations of Doxorubicin.

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