

#21114

Chk1 (Ab-317) Antibody

Catalog: #21114-1 50µl **Orders:** order@signalwayantibody.com
#21114-2 100µl **Support:** tech@signalwayantibody.com
Storage: Store at -20°C/1 year **Web:** www.signalwayantibody.com



Application	Species Reactivity	Source	Molecular Wt.
WB IHC	Human Mouse	Rabbit Polyclonal Ab	56KD

Description: Antibodies were produced by immunizing rabbits with synthetic peptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific peptide.

Specificity: The antibody detects endogenous level of total Chk1 protein.

Immunogen: Peptide sequence around aa.315~319 (S-S-S-Q-P) derived from Human Chk1.

Formulation: Supplied at 1.0mg/mL in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.

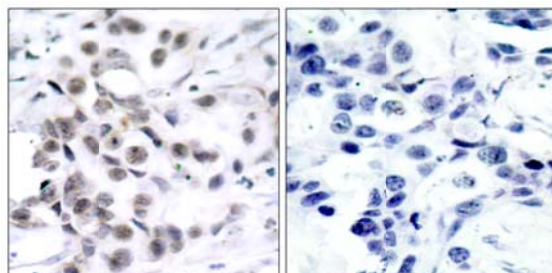
Synonyms: CHEK1

Accession No.: Swiss-Prot#: O14757 NCBI Gene#: 1111
NCBI Protein#: NP_001107593.1

Background: Chk1 is a protein kinase that inhibits mitotic entry after DNA damage, required for the DNA damage checkpoint and is strongly similar to murine Chek1. Checkpoint pathways control the order and timing of cell cycle transitions and ensure that critical events, such as DNA replication and chromosome segregation, are completed with high fidelity. The mouse and human proteins share 90% sequence identity through the protein kinase domains. The sequence of the 476-amino acid human Chek1 protein is 29%, 40%, and 44% identical to those of the fission yeast Chek1, *C. elegans* Chek1, and *Drosophila* 'grapes' (Grp) proteins, respectively. Chk1 is expressed ubiquitously as an approximately 2.4-kb mRNA, with the most abundant expression in thymus, testis, small intestine, and colon. The protein has altered mobility when isolated from cells treated with ionizing radiation, indicating that Chk1 is modified in response to DNA damage. In vitro, Chk1 directly phosphorylates a regulator of CDC2 tyrosine phosphorylation, CDC25C. In response to DNA damage, Chk1 phosphorylates and inhibits CDC25C, thus preventing activation of the CDC2-Cyclin-B complex and mitotic entry

References:

Zhang YW, et al. (2005) Mol Cell; 19(5): 607-18.
Bhoomik A, et al. (2005) Mol Cell; 18(5): 577-87.
Rocha S, et al. (2005) EMBO J.
Clarke CA, et al. (2005) Biochem J.
Yu X, et al. (2004) Mol Cell Biol; 24(21): 9478-86.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using Chk1 (Ab-317) Antibody #21114 (left) or the same antibody preincubated with blocking peptide (right).

Citation: If you publish research using #21114 please [let us know](#).

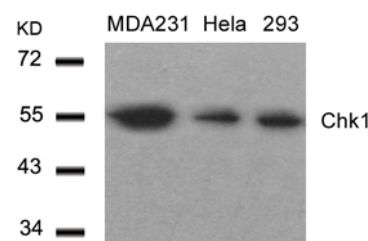
Related Pathway: CellCycle, Kinase/Phosphatases

Note: For western blotting, incubate membrane with diluted antibody in 5% nonfat milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

This product is for in vitro research use only and is not intended for use in humans or animals.

Recommended Dilutions:

Western blotting 1:500~1:1000
Immunohistochemistry 1:50~1:100



Western blot analysis of extracts from MDA231, HeLa and 293 cells using Chk1 (Ab-317) Antibody #21114.