

Chk1(Ab-317) Antibody

Catalog No: #21114

Package Size: #21114-1 50ul #21114-2 100ul

Description

Product Name	Chk1(Ab-317) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Antibodies were produced by immunizing rabbits with synthetic peptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific peptide.
Applications	WB IHC
Species Reactivity	Hu
Specificity	The antibody detects endogenous level of total Chk1 protein.
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around aa.315~319 (S-S-S-Q-P) derived from Human Chk1.
Conjugates	Unconjugated
Target Name	Chk1
Other Names	CHEK1
Accession No.	Swiss-Prot: O14757NCBI Protein: NP_001107593.1
Concentration	1.0mg/ml
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C for long term preservation (recommended). Store at 4°C for short term use.

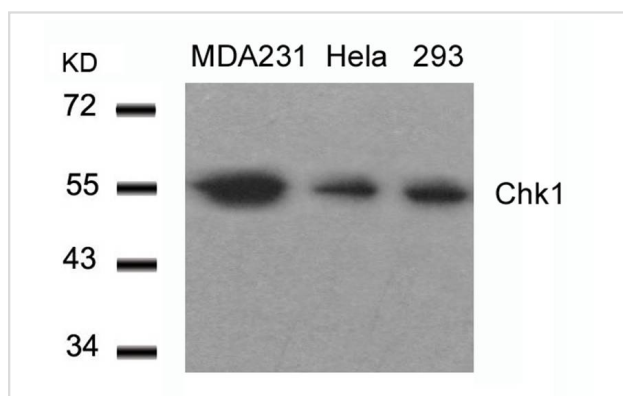
Application Details

Predicted MW: 56kd

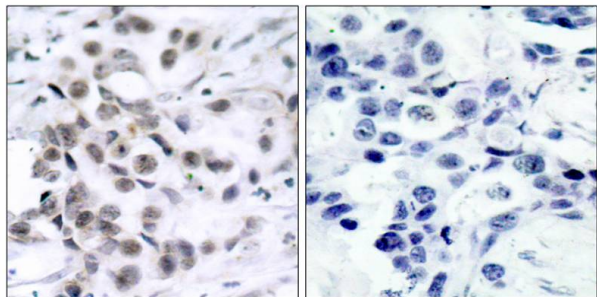
Western blotting: 1:500~1:1000

Immunohistochemistry: 1:50~1:100

Images



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



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).

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 Chk1. 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 Chk1 protein is 29%, 40%, and 44% identical to those of the fission yeast Chk1, *C. elegans* Chk1, 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

Zhang YW, et al. (2005) *Mol Cell*; 19(5): 607-18.

Bhoumik 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.

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