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CHEK2 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a full length recombinant CHEK2.
Catalog # AT1516a

Product Information

Application	WB, IHC, IF, E
Primary Accession	O96017
Other Accession	BC004207
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG2a Kappa
Clone Names	4B7
Calculated MW	60915

Additional Information

Gene ID	11200
Other Names	Serine/threonine-protein kinase Chk2, CHK2 checkpoint homolog, Cds1 homolog, Hucds1, hCds1, Checkpoint kinase 2, CHEK2, CDS1, CHK2, RAD53
Target/Specificity	CHEK2 (AAH04207.1, 1 a.a. ~ 543 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 IHC~~1:100~500 IF~~1:50~200 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	CHEK2 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

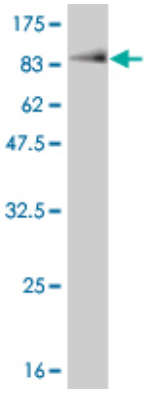
In response to DNA damage and replication blocks, cell cycle progression is halted through the control of critical cell cycle regulators. The protein encoded by this gene is a cell cycle checkpoint regulator and putative tumor suppressor. It contains a forkhead-associated protein interaction domain essential for activation in response to DNA damage and is rapidly phosphorylated in response to replication blocks and DNA damage. When activated, the encoded protein is known to inhibit CDC25C phosphatase, preventing entry into mitosis, and has been shown to stabilize the tumor suppressor protein p53, leading to cell cycle arrest in G1. In addition, this protein interacts with and phosphorylates BRCA1, allowing BRCA1 to restore survival after DNA damage. Mutations in this gene have been linked with Li-Fraumeni syndrome, a highly penetrant familial cancer phenotype usually associated with inherited mutations in TP53. Also, mutations in this gene are thought to confer a predisposition to sarcomas, breast cancer, and brain tumors. This nuclear

protein is a member of the CDS1 subfamily of serine/threonine protein kinases. Three transcript variants encoding different isoforms have been found for this gene.

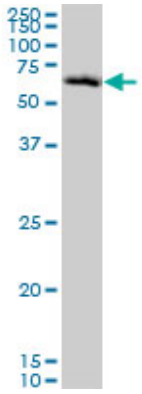
References

Evaluation of the contribution of the three breast cancer susceptibility genes CHEK2, STK11, and PALB2 in non-BRCA1/2 French Canadian families with high risk of breast cancer. Gu?nard F, et al. Genet Test Mol Biomarkers, 2010 Aug. PMID 20722467.CHEK2 I157T and colorectal cancer in Bulgaria. Konstantinova D, et al. J BUON, 2010 Apr-Jun. PMID 20658728.A large-scale candidate gene approach identifies SNPs in SOD2 and IL13 as predictive markers of response to preoperative chemoradiation in rectal cancer. Ho-Pun-Cheung A, et al. Pharmacogenomics J, 2010 Jul 20. PMID 20644561.Comprehensive screen of genetic variation in DNA repair pathway genes and postmenopausal breast cancer risk. Monsees GM, et al. Breast Cancer Res Treat, 2010 May 23. PMID 20496165.BRCA1, BRCA2 and CHEK2 c.1100 delC mutations in patients with double primaries of the breasts and/or ovaries. Evans DG, et al. J Med Genet, 2010 Aug. PMID 20472656.

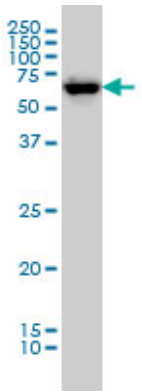
Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (85.14 KDa) .

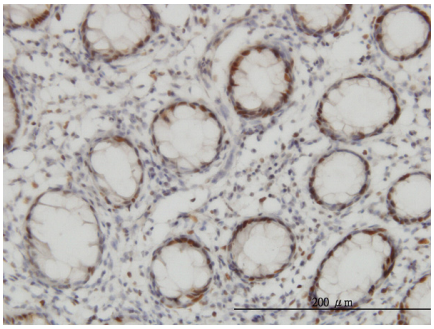


CHEK2 monoclonal antibody (M01), clone 4B7. Western Blot analysis of CHEK2 expression in HeLa ((Cat # AT1516a)

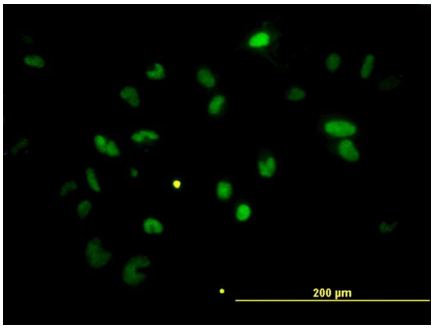


CHEK2 monoclonal antibody (M01), clone 4B7 Western Blot analysis of CHEK2 expression in Hela S3 NE ((Cat # AT1516a)

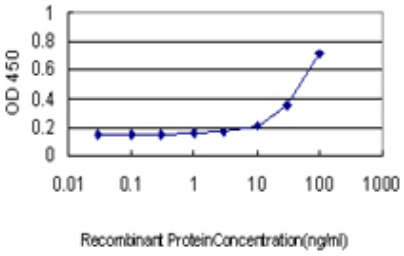
Immunoperoxidase of monoclonal antibody to CHEK2 on formalin-fixed paraffin-embedded human colon.



[antibody concentration 3 ug/ml]



Immunofluorescence of monoclonal antibody to CHEK2 on HeLa cell. [antibody concentration 10 ug/ml]



Detection limit for recombinant GST tagged CHEK2 is approximately 3ng/ml as a capture antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.