Product Information Sheet

Polyclonal Anti-CHK2 Checkpoint homolog, *CHK2*

Catalogue No. PA1202

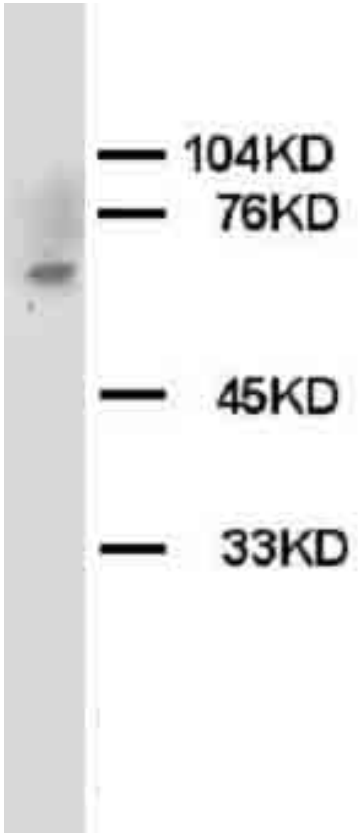
Lot No. 08L01

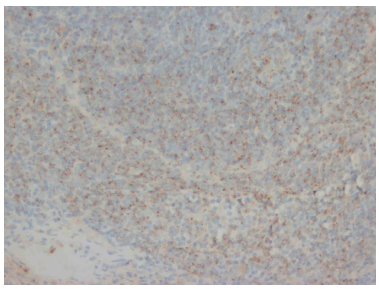
Ig type rabbit IgG

Size 100µg/vial

Specificity
Human, mouse, rat.
No cross reactivity with other proteins.

Recommended application
Western blot





Immunogen
A synthetic peptide corresponding to a sequence at the C-terminal of human CHK2, different to the related rat sequence by a single amino acid.

Purity
Immunogen affinity purified.

Application

	Concen-tration	Tested Species	Concluded Species	Antigen Retrieval
WB	0.75µg/ml	Hu, Rat	Ms	-
IHC-P	-	-	-	-
IHC-F	-	-	-	-
ICC	-	-	-	-

Other applications have not been tested.
Optimal dilutions should be determined by end user.

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Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg Thimerosal, 0.05mg NaN_3.

Reconstitution

0.2ml of distilled water will yield a concentration of 500μg/ml.

Storage

At -20˚C for one year. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for longer time.

BACKGROUND

CHK2, a protein kinase that is activated in response to DNA damage, is involved in cell cycle arrest. Mapped on 22q12.1, CHK2 has a potential regulatory region rich in SQ and TQ amino acid pairs. It regulates BRCA1 function after DNA damage by phosphorylating serine-988 of BRCA1[1]. Additionally, CHK2 can be modified by phosphorylation and activated in response to ionizing radiation, and can be also modified in response to hydroxyurea treatment[2]. Furthermore, oligomerization of CHEK2 increases the efficiency of transautophosphorylation, resulting in the release of active CHEK2 monomers that proceed to enforce checkpoint control in irradiated cells[3]. Morever, CHK2 is a tumor suppressor gene conferring predisposition to sarcoma, breast cancer, and brain tumors, and that their observations provided a link between the central role of p53 inactivation in human cancer and the well-defined G2 checkpoint in yeast[4]. There is a wide expression of small amounts of CHK2 mRNA with larger amounts in human testis, spleen, colon, and peripheral blood leukocytes.

REFERENCE

1. Lee, J.-S.; Collins, K. M.; Brown, A. L.; Lee, C.-H.; Chung, J. H. : hCds1-mediated phosphorylation of BRCA1 regulates the DNA damage response. *Nature* 404: 201-204, 2000.
2. Brown, A. L.; Lee, C.-H.; Schwarz, J. K.; Mitiku, N.; Piwnica-Worms, H.; Chung, J. H. : A human Cds1-related kinase that functions downstream of ATM protein in the cellular response to DNA damage. *Proc. Nat. Acad. Sci.* 96: 3745-3750, 1999.
3. Ahn, J.-Y.; Li, X.; Davis, H. L.; Canman, C. E. : Phosphorylation of threonine 68 promotes oligomerization and autophosphorylation of the Chk2 protein kinase via the forkhead-associated domain. *J. Biol. Chem.* 277: 19389-19395, 2002.
4. Bell, D. W.; Varley, J. M.; Szydlo, T. E.; Kang, D. H.; Wahrer, D. C. R.; Shannon, K. E.; Lubratovich, M.; Verselis, S. J.; Isselbacher, K. J.; Fraumeni, J. F.; Birch, J. M.; Li, F. P.; Garber, J. E.; Haber, D. A. : Heterozygous germ line hCHK2 mutations in Li-Fraumeni syndrome. *Science* 286: 2528-2531, 1999.