



Product Information Sheet

Polyclonal Anti-CHEK2 Checkpoint homolog, **CHEK2** (Magnetic Bead Conjugate)

Catalogue No. PA1202-M

Immunogen

Lot No. 08L01

A synthetic peptide corresponding to a sequence at the C-terminal of human CHEK2, different to the related rat sequence by a single amino acid.

Ig type: rabbit IgG1

Purification

Size: 100µg/Vial

Immunogen affinity purified

Specificity

Human, mouse, rat.

No cross reactivity with other proteins.

Contents

Each vial contains 1mg/ml Magnetic Bead in PBS, pH 7.2, 0.05mg NaN₃.

Storage

Store at 4°C for frequent use.

Recommended application

Immunoprecipitation(IP)

Description:

This Antagene antibody is immobilized by the covalent reaction of hydrazinonicotinamide-modified antibody with formylbenzamide-modified magnetic

BACKGROUND

CHEK2, a protein kinase that is activated in response to DNA damage, is involved in cell cycle arrest. Mapped on 22q12.1, CHEK2 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 BRCA1¹. Additionally, CHEK2 can be modified by phosphorylation and activated in response to ionizing radiation, and can be also modified in response to hydroxyurea treatment². 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 cells³. Moreover, CHEK2 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 yeast⁴. There is a wide expression of small amounts of CHEK2 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.

For Research Use Only not for diagnostic and clinical use

Contact: Antagene, Inc. | Tel: 1 (866) 964-2589 | Fax: 1 (888) 225-1868 | Email: Info@antageneinc.com