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RPA2

Reactivity: Human

Tested applications:WB

Recommended Dilution:WB 1:500 - 1:1000

Calculated MW:29kDa

Observed MW: Refer to Figures

Immunogen:

A synthetic peptide of human RPA2

Storage Buffer:

Store at 4. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

e

Synonym:

REPA2; RPA32

Catalog #:A0568

Antibody Type:

Monoclonal Antibody

Species: Mouse

Gene ID:6118

Isotype: IgG

Swiss Prot:P15927

Purity: Affinity purification

For research use only.

Background:

RPA70 (HSSB, REPA1, RF-A, RP-A, p70) is a component of a heterotrimeric complex, composed of 70, 32/30 and 14 kDa subunits, collectively known as RPA. RPA is a single stranded DNA binding protein, whose DNA binding activity is believed to reside entirely in the 70 kDa subunit. The complex is required for almost all aspects of cellular DNA metabolism such as DNA replication (1-3), recombination, cell cycle and DNA damage checkpoints, and all major types of DNA repair including nucleotide excision, base excision, mismatch and double-strand break repairs (4-7). In response to genotoxic stress in eukaryotic cells, RPA has been shown to associate with the Rad9/Rad1/Hus1 (9-1-1) checkpoint complex (8). RPA is hyperphosphorylated upon DNA damage or replication stress by checkpoint kinases including ataxia telangiectasia mutated (ATM), ATM and Rad3-related (ATR), and DNA-dependent protein kinase (DNA-PK) (9-11). Hyperphosphorylation may alter RPA-DNA and RPA-protein interactions. In addition to the checkpoint partners, RPA interacts with a wide variety of protein partners, including proteins required for normal replication such as RCF, PCNA and Pol , and also proteins involved in SV40 replication, such as DNA polymerase I and SV40 large T antigen (10,12).1.Liu, V.F. and Weaver, D.T. (1993) Mol. Cell Biol. 13, 7222-7231.2.Wobbe, C.R. et al. (1987) Proc. Natl. Acad. Sci. USA 84, 1834-1838.3.Fairman, M.P. and Stillman, B. (1988) EMBO J. 7, 1211-1218.4.Wold, M.S. and Kelly, T. (1988) Proc. Natl. Acad. Sci. USA 85, 2523-2527.5.Zhou, B.B. and Elledge, S.J. (2000) Nature 408, 433-439.6.Kastan, M.B. and Bartek, J. (2004) Nature 432, 316-323.7.Sancar, A. et al. (2004) Annu. Rev. Biochem. 73, 39-85.8.Guo, S. et al. (2006) J Biol Chem 281, 21607-16.9.Wu, X. et al. (2005) Oncogene 24, 4728-4735.10.Binz, S.K. et al. DNA Repair (Amst) 3, 1015-1024.11.Nuss, J.E. et al. (2005) Biochemistry 44, 8428-8437.12.Yuzhakov, A. et al. (1999) EMBO J. 18, 6189-6199.

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