

# RPA70 Antibody

✓ 100 µl  
(10 western blots)

**Orders** ■ 877-616-CELL (2355)  
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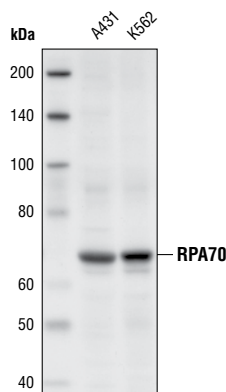
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IF-IC, F Endogenous	H, R, Mk	70 kDa	Rabbit**

**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 major single stranded DNA binding protein, and the DNA binding activity of the complex 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 (1,2,3), 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 (4,5,6,7).

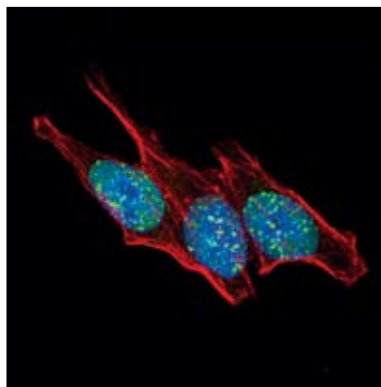
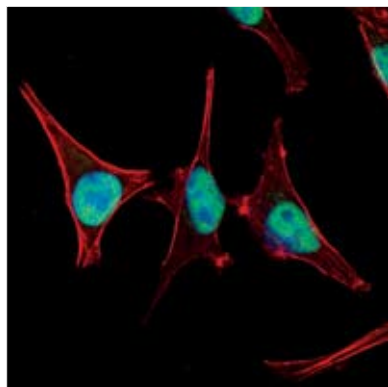
In response to genotoxic stress in eukaryotic cells, RPA has been shown to associate with the Rad9/Rad1/Hus1 (9-1-1) checkpoint complex (8). RPA is hyperphosphorylated upon DNA damage or replication stress by checkpoint kinases including ataxia telangiectasia mutated (ATM), ATM and Rad3-related (ATR), and DNA-dependent protein kinase (DNA-PK) (9,10,11). 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 α, and also proteins involved in SV40 replication, DNA polymerase I and SV40 large T antigen (12,10).

**Specificity/Sensitivity:** RPA70 antibody detects endogenous levels of total RPA70 subunit.



Western blot analysis of extracts from A431 and K562 cells, using RPA70 Antibody.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids near the amino terminus of human RPA70. Antibodies are purified by protein A and peptide affinity chromatography.



Confocal immunofluorescent analysis of HeLa cells, untreated (left) or UV-treated (right), labeled with RPA70 Antibody (green) showing translocation to distinct nuclear foci after UV damage. Actin filaments have been labeled with Alexa Fluor® 555 phalloidin. Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Entrez-Gene ID #6117  
Swiss-Prot Acc. #P27694

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (IF-IC)	1:25
Flow Cytometry	1:25

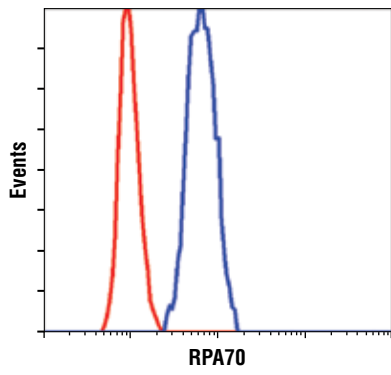
**Background References:**

- (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.
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- (10) Binz, S.K. et al. *DNA Repair (Amst)* 3, 1015-1024.
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**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



*Flow cytometric analysis of Jurkat cells, using RPA70 antibody (blue) compared to a nonspecific negative control antibody (red).*