

Rabbit RPA2 Polyclonal Antibody | anti-RPA2 antibody

RPA2 Antibody

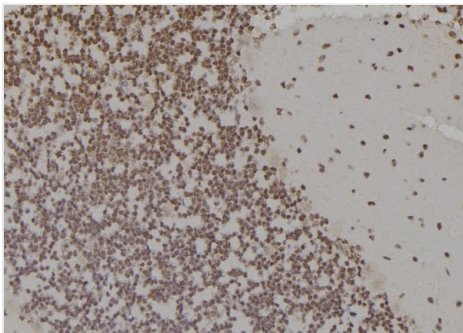
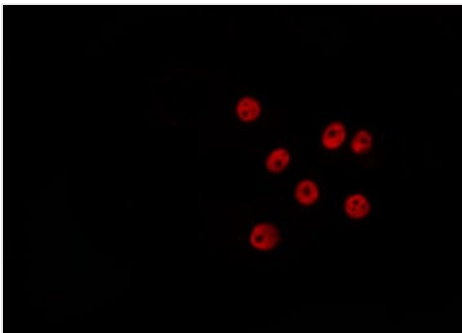
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326667	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

RPA2; Polyclonal Antibody; RPA2 Antibody; 60S acidic ribosomal protein P1; AA409079; AI325195; AU020965; ik:tdsubc_2g1; M(2)21C; MGC137236; OTTHUMP00000004008; p32; p34; RCJMB04_6d17 replication protein A2; 32kDa; REPA2; Replication factor A protein 2; Replication protein A 32 kDa subunit; Replication protein A 32kDa subunit; Replication protein A 34 kDa subunit; Replication protein A; Replication Protein A2 (32kDa); Replication protein A2; RF-A protein 2; Rf-A2; RFA; RFA2_HUMAN; RP-A p32; RP-A p34; RP21C; RPA 2; RPA 32; RPA; Rpa2; RPA32; RPA34; RpLP1; RpP2; xx:tdsubc_2g1; zgc:109822; anti-RPA2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	RPA2 antibody detects endogenous levels of total RPA2
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	174
Applicable Applications for anti-RPA2 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human RPA2
Subcellular Location	Nucleus. Nucleus > PML body. Also present in PML nuclear bodies. Redistributes to discrete nuclear foci upon DNA damage.
Tissue Specificity	Translationally up-regulated in response to DNA damage (at protein level).
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

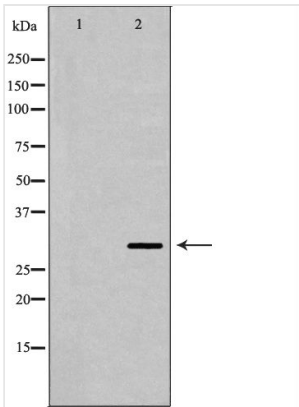


IF (Immunofluorescence)

AAA326667 staining Hela by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

IHC (Immunohistochemistry)

AAA326667 at 1/100 staining Rat brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)

Western blot analysis of extracts of A549, using RPA2 antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-RPA2 antibody	Description: 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 alpha, and also proteins involved in SV40 replication, such as DNA polymerase I and SV40 large T antigen (10, 12). Function: As part of the heterotrimeric replication protein A complex (RPA/RP-A), binds and stabilizes single-stranded DNA intermediates, that form during DNA replication or upon DNA stress. It prevents their reannealing and in parallel, recruits and activates different proteins and complexes involved in DNA metabolism. Thereby, it plays an essential role both in DNA replication and the cellular response to DNA damage. In the cellular response to DNA damage, the RPA complex controls DNA repair and DNA damage checkpoint activation. Through recruitment of ATRIP activates the ATR kinase a master regulator of the DNA damage response. It is required for the recruitment of the DNA double-strand break repair factors RAD51 and RAD52 to chromatin in response to DNA damage. Also recruits to sites of DNA damage proteins like XPA and XPG that are involved in nucleotide excision repair and is required for this mechanism of DNA repair. Plays also a role in base excision repair (BER) probably through interaction with UNG. Also recruits SMARCAL1/HARP, which is involved in replication fork restart, to sites of DNA damage. May also play a role in telomere maintenance. Subunit Structure: Component of the replication protein A complex (RPA/RP-A), a heterotrimeric complex composed of RPA1, RPA2 and RPA3 (PubMed:2406247, PubMed:19116208, PubMed:10449415). Interacts with PRPF19; the PRP19-CDC5L complex is recruited to the sites of DNA repair where it ubiquitinates the replication protein A complex (RPA) (PubMed:24332808). Interacts with SERTAD3 (PubMed:10982866). Interacts with TIPIN (PubMed:17141802, PubMed:17296725). Interacts with TIMELESS (PubMed:17141802). Interacts with PPP4R2; the interaction is direct, DNA damage-dependent and mediates the recruitment of the PP4 catalytic subunit PPP4C (PubMed:20154705). Interacts (hyperphosphorylated) with RAD51 (PubMed:20154705). Interacts with SMARCAL1; the interaction is direct and mediates the recruitment to the RPA complex of SMARCAL1 (PubMed:19793861, PubMed:19793862, PubMed:19793863). Interacts with RAD52 and XPA; those interactions are direct and associate RAD52 and XPA to the RPA complex (PubMed:7700386, PubMed:8702565, PubMed:17765923, PubMed:11081631). Interacts with FBXO18 (PubMed:23319600). Interacts with ETAA1; the interaction is direct and promotes ETAA1 recruitment at stalled replication forks (PubMed:27601467, PubMed:27723720, PubMed:27723717). Interacts with RFWD3 (PubMed:21504906, PubMed:21558276, PubMed:26474068, PubMed:28575657). Post-translational Modifications: Differentially phosphorylated throughout the cell cycle, becoming phosphorylated at the G1-S transition and dephosphorylated in late mitosis. Mainly phosphorylated at Ser-23 and Ser-29, by cyclin A-CDK2 and cyclin B-CDK1, respectively during DNA replication and mitosis. Dephosphorylation may require the serine/threonine-protein phosphatase 4. Phosphorylation at Ser-23 and Ser-29 is a prerequisite for further phosphorylation. Becomes hyperphosphorylated on additional residues including Ser-4, Ser-8, Thr-21 and Ser-33 in response to DNA damage. Hyperphosphorylation is mediated by ATM, ATR and PRKDC. Primarily recruited to DNA repair nuclear foci as a hypophosphorylated form it undergoes subsequent hyperphosphorylation, catalyzed by ATR. Hyperphosphorylation is required for RAD51 recruitment to chromatin and efficient DNA repair. Phosphorylation at Thr-21 depends upon RFWD3 presence. DNA damage-induced 'Lys-63'-linked polyubiquitination by PRPF19 mediates ATRIP recruitment to the RPA complex at sites of DNA damage and activation of ATR (PubMed:24332808). Ubiquitinated by RFWD3 at stalled replication forks in response to DNA damage: ubiquitination by RFWD3 does not lead to degradation by the proteasome and promotes removal of the RPA complex from stalled replication forks, promoting homologous recombination (PubMed:26474068). Similarity: Belongs to the replication factor A protein 2 family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	554595586
NCBI GeneID	6118
NCBI Accession #	NP_001273005.1
NCBI GenBank Nucleotide #	NM_001286076.1

UniProt Accession #	P15927 ; Q52II0 ; Q5TEI9 ; Q5TEJ5
Molecular Weight	Observed: 29 kDa Predicted: 30 kDa
NCBI Official Full Name	replication protein A 32 kDa subunit isoform 2
NCBI Official Synonym Full Names	replication protein A2
NCBI Official Symbol	RPA2
NCBI Official Synonym Symbols	REPA2; RPA32; RP-A p32; RP-A p34
NCBI Protein Information	replication protein A 32 kDa subunit
UniProt Protein Name	Replication protein A 32 kDa subunit
UniProt Gene Name	RPA2
UniProt Synonym Gene Names	REPA2; RPA32; RPA34; RP-A p32; RF-A protein 2; RP-A p34

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/rpa2-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/326667>