



Rabbit Anti-phospho-RPA2 (Thr21) antibody

SL5693R

Product Name:	phospho-RPA2 (Thr21)
Chinese Name:	磷酸化复制因子A蛋白2抗体
Alias:	RPA32/RPA2(phospho Thr21); RPA32/RPA2(phospho T21); 60S acidic ribosomal protein P1; p32; p34; 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; Replication protein A2, 32kDa; 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.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	29 kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from human RPA2 around the phosphorylation site of Thr21:GY(p-T)Q
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed

Required for DNA recombination, repair and replication. The activity of RP-A is mediated by single-stranded DNA binding and protein interactions. Functions as component of the alternative replication protein A complex (aRPA). aRPA binds single-stranded DNA and probably plays a role in DNA repair; it does not support chromosomal DNA replication and cell cycle progression through S-phase. In vitro, aRPA cannot promote efficient priming by DNA polymerase alpha but supports DNA polymerase delta synthesis in the presence of PCNA and replication factor C (RFC), the dual incision/excision reaction of nucleotide excision repair and RAD51-dependent strand exchange.

Function:

Required for DNA recombination, repair and replication. The activity of RP-A is mediated by single-stranded DNA binding and protein interactions. Required for the efficient recruitment of the DNA double-strand break repair factor RAD51 to chromatin in response to DNA damage.

Functions as component of the alternative replication protein A complex (aRPA). aRPA binds single-stranded DNA and probably plays a role in DNA repair; it does not support chromosomal DNA replication and cell cycle progression through S-phase. In vitro, aRPA cannot promote efficient priming by DNA polymerase alpha but supports DNA polymerase delta synthesis in the presence of PCNA and replication factor C (RFC), the dual incision/excision reaction of nucleotide excision repair and RAD51-dependent strand exchange.

Product Detail:

Subunit:

Heterotrimer of 70, 32 and 14 kDa chains (canonical replication protein A complex). Component of the alternative replication protein A complex (aRPA) composed of RPA1, RPA3 and RPA4. The DNA-binding activity may reside exclusively on the 70 kDa subunit. Binds to SERTAD3/RBT1. Interacts with TIPIN. Directly interacts with PPP4R2, but not with SMEK2; this interaction is DNA damage-dependent and leads RPA2 dephosphorylation by PPP4C recruitment. Interacts with RAD51, preferentially when hyperphosphorylated. Directly interacts with RFW3.

Subcellular Location:

Nucleus. Nucleus, PML body. Note=Also present in PML nuclear bodies. Redistributes to discrete nuclear foci upon DNA damage.

Post-translational modifications:

Phosphorylated in a cell-cycle-dependent manner (from the S phase until mitosis). In response to DNA damage, recruited to DNA-repair nuclear foci, as a hypophosphorylated form. The necessary dephosphorylation step is catalyzed by PP4. Subsequent hyperphosphorylation, catalyzed by ATR, is required for RAD51 recruitment to chromatin and efficient DNA repair. Can be phosphorylated in vitro by PRKDC/DNA-PK in the presence of Ku and DNA, and by CDK1. Phosphorylation at Thr-21 depends upon RFW3 presence.

SWISS:

P15927

Gene ID:
6118

Database links:

[Entrez Gene: 6118](#)Human

[Entrez Gene: 19891](#)Mouse

[Omim: 179836](#)Human

[SwissProt: P15927](#)Human

[SwissProt: Q62193](#)Mouse

[Unigene: 703070](#)Human

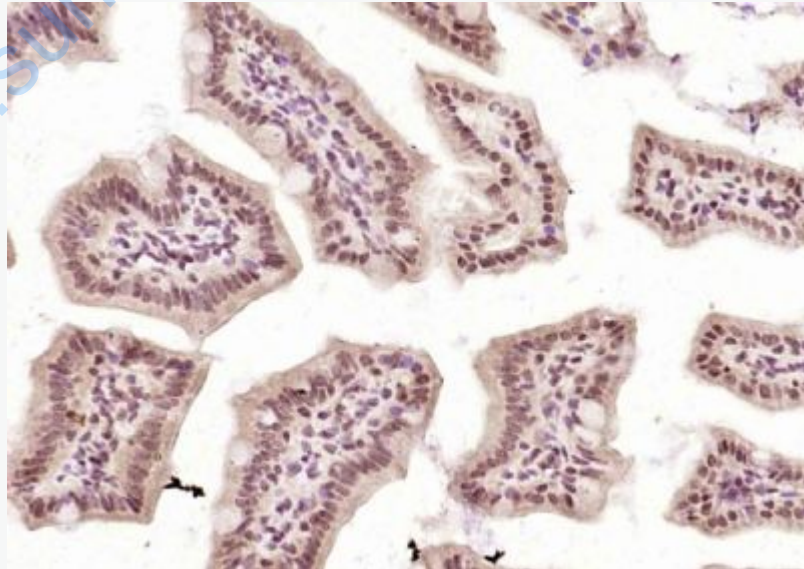
[Unigene: 79411](#)Human

[Unigene: 2870](#)Mouse

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Paraformaldehyde-fixed, paraffin embedded (mouse intestine); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by

3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-RPA2 (Thr21)) Polyclonal Antibody, Unconjugated (SL5693R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-RPA2 (Thr21)) Polyclonal Antibody, Unconjugated (SL5693R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.