10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RPA2 Recombinant Rabbit mAb

RPA2 Recombinant Rabbit mAb
Catalog # AP94262

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC
Host	Rabbit
Clonality	Recombinant
Calculated MW	29 KDa
Physical State	Liquid
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus. Nucleus, PML body. Note=Also present in PML nuclear bodies. Redistributes to discrete nuclear foci upon DNA damage.
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 RFWD3.
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 RFWD3 presence.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

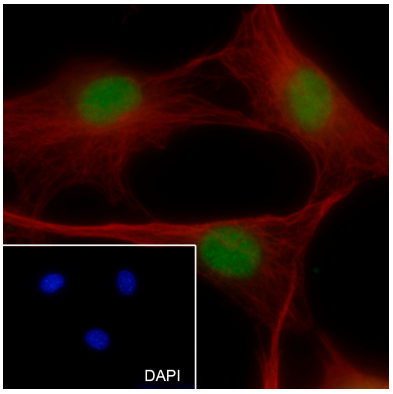
Dilution	WB=1:500-1:2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:50,IF=0,Flow-Cyt=1:50-1:100

Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

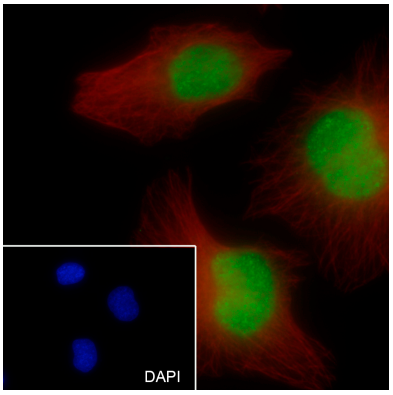
Background

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

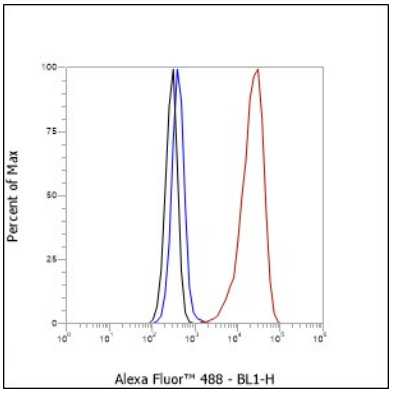
Images



Cell line: NIH/3T3 Fixative: 100% Ice-cold methanol Permeabilization: 0.1% TritonX-100 Primary ab dilution: 1:50 Primary incubation condition: 4°C overnight Secondary ab: Goat Anti-Rabbit IgG Nuclear counter stain: DAPI (Blue) Counter stain: Tubulin (Red) Comment: Color green is the positive signal for AP94262

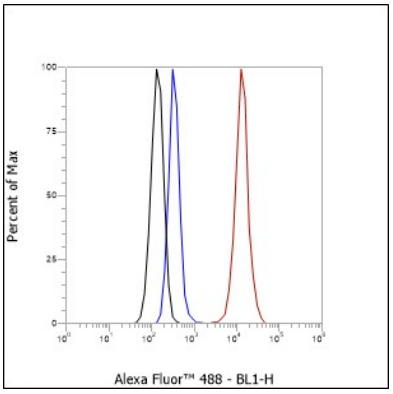


Cell line: HeLa Fixative: 100% Ice-cold methanol Permeabilization: 0.1% TritonX-100 Primary ab dilution: 1:50 Primary incubation condition: 4°C overnight Secondary ab: Goat Anti-Rabbit IgG Nuclear counter stain: DAPI (Blue) Counter stain: Tubulin (Red) Comment: Color green is the positive signal for AP94262

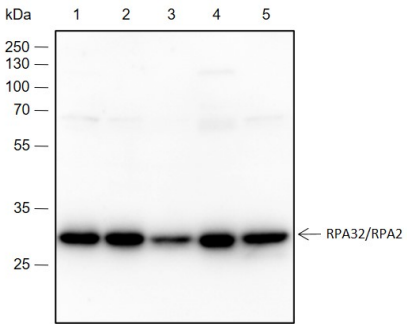


Cell line: HeLa Fixative: 4% Paraformaldehyde Permeabilization: 90% Methanol Primary ab dilution: 1:100 Secondary ab: Goat anti Rabbit IgG Unlabelled control: The cell without incubation with primary antibody and secondary antibody (Black line). Isotype control: Rabbit monoclonal IgG (Blue line). Comment: Line red is the positive signal for AP94262

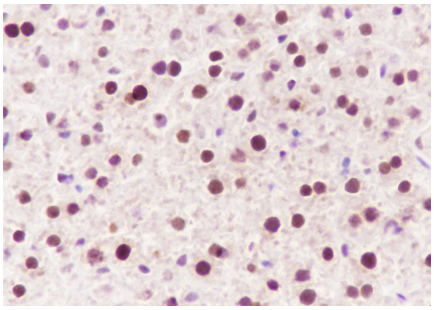
Cell line: NIH/3T3 Fixative: 4% Paraformaldehyde Permeabilization: 90% Methanol Primary ab dilution: 1:100 Secondary ab: Goat anti Rabbit IgG Unlabelled control: The cell without incubation with primary antibody and secondary antibody (Black line). Isotype control: Rabbit monoclonal IgG (Blue line). Comment:



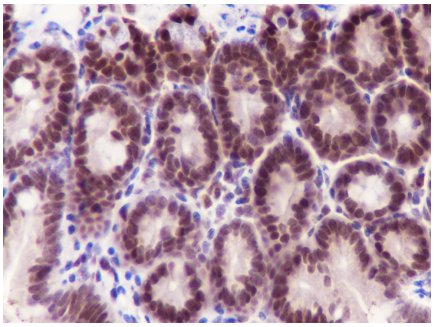
Line red is the positive signal for AP94262



Blocking buffer: 5% NFDM/TBST Primary ab dilution: 1:2000 Primary ab incubation condition: 2 hours at room temperature Secondary ab: Goat Anti-Rabbit IgG H&L (HRP) Lysate: 1: HeLa, 2: MCF-7, 3: HepG2, 4: C6, 5: NIH-3T3 Protein loading quantity: 20 µg Exposure time: 30 s Predicted MW: 29 kDa Observed MW: 29 kDa



Tissue: Rat liver Section type: Formalin fixed & Paraffin -embedded section Retrieval method: High temperature and high pressure Retrieval buffer: Tris/EDTA buffer, pH 9.0 Primary ab dilution: 1:1000 Primary ab incubation condition: 1 hour at room temperature Secondary ab: SP Kit(Rabbit) (sp-0023) Counter stain: Hematoxylin (Blue) Comment: Color brown is the positive signal for AP94262



Tissue: Mouse small intestine Section type: Formalin fixed & Paraffin -embedded section Retrieval method: High temperature and high pressure Retrieval buffer: Tris/EDTA buffer, pH 9.0 Primary ab dilution: 1:1000 Primary ab incubation condition: 1 hour at room temperature Secondary ab: SP Kit(Rabbit) (sp-0023) Counter stain: Hematoxylin (Blue) Comment: Color brown is the positive signal for AP94262