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RPA2 Antibody (N-term)) Blocking Peptide

Synthetic peptide
Catalog # BP9115a

Specification

RPA2 Antibody (N-term)) Blocking Peptide - Product Information

Primary Accession P15927

RPA2 Antibody (N-term)) Blocking Peptide - Additional Information

Gene ID 6118

Other Names
Replication protein A 32 kDa subunit, RP-A p32, Replication factor A protein 2, RF-A protein 2, Replication protein A 34 kDa subunit, RP-A p34, RPA2, REPA2, RPA32, RPA34

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP9115a was selected from the N-term region of human RPA2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

RPA2 Antibody (N-term)) Blocking Peptide - Protein Information

RPA2 Antibody (N-term)) Blocking Peptide - Background

RPA2 is required for DNA recombination, repair and replication. The activity of RP-A is mediated by single-stranded DNA binding and protein interactions.

RPA2 Antibody (N-term)) Blocking Peptide - References

Umbricht,C.B., et.al., J. Biol. Chem. 268 (9), 6131-6138 (1993)Oakley,G.G., et.al., Biochemistry 48 (31), 7473-7481 (2009)

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Name RPA2

Synonyms REPA2, RPA32, RPA34

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.

Cellular Location
Nucleus. Nucleus, PML body. Note=Redistributes to discrete nuclear foci upon DNA damage in an ATR-dependent manner

RPA2 Antibody (N-term)) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides