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Anti-RPA70 Monoclonal Antibody

Catalog # ABO14591

Product Information

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	P27694
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-RPA70 Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human.

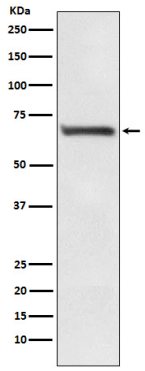
Additional Information

Gene ID	6117
Other Names	Replication protein A 70 kDa DNA-binding subunit, RP-A p70, Replication factor A protein 1, RF-A protein 1, Single-stranded DNA-binding protein, Replication protein A 70 kDa DNA-binding subunit, N-terminally processed, RPA1, REPA1, RPA70
Calculated MW	68138
Application Details	WB 1:500-1:1000 IHC 1:50-1:200 ICC/IF 1:50-1:200 IP 1:20 FC 1:60
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: BB-18
Immunogen	A synthesized peptide derived from human RPA70 Plays an essential role in several cellular processes in DNA metabolism including replication, recombination and DNA repair. Binds and subsequently stabilizes single-stranded DNA intermediates and thus prevents complementary DNA from reannealing.
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	RPA1
Synonyms	REPA1, RPA70
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 (PubMed:17596542, PubMed:27723717, PubMed:27723720). Thereby, it plays an essential role both in DNA replication and the cellular response to DNA damage (PubMed:9430682). 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 (PubMed:24332808). It is required for the recruitment of the DNA double-strand break repair factors RAD51 and RAD52 to chromatin in response to DNA damage (PubMed:17765923). 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 (PubMed:7697716). Also plays a role in base excision repair (BER) probably through interaction with UNG (PubMed:9765279). Also recruits SMARCAL1/HARP, which is involved in replication fork restart, to sites of DNA damage. Plays a role in telomere maintenance (PubMed:17959650, PubMed:34767620). As part of the alternative replication protein A complex, aRPA, binds single-stranded DNA and probably plays a role in DNA repair. Compared to the RPA2- containing, canonical RPA complex, may not support chromosomal DNA replication and cell cycle progression through S-phase. The aRPA may not promote efficient priming by DNA polymerase alpha but could support DNA synthesis by polymerase delta in presence of PCNA and replication factor C (RFC), the dual incision/excision reaction of nucleotide excision repair and RAD51-dependent strand exchange (PubMed:19996105). RPA stimulates 5'-3' helicase activity of the BRIP1/FANCJ (PubMed:17596542).
Cellular Location	Nucleus. Nucleus, PML body. Note=Enriched in PML bodies in cells displaying alternative lengthening of their telomeres

Images



Western blot analysis of RPA70 expression in HEK293 cell lysate.

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