

Replication protein A 70 kDa DNA-binding subunit (RPA1) Recombinant Protein | RPA1 recombinant protein

Recombinant Human Replication protein A 70 kDa DNA-binding subunit (RPA1)

CATALOG # AAA18520	HOST E Coli or Yeast or Baculovirus or Mammalian Cell
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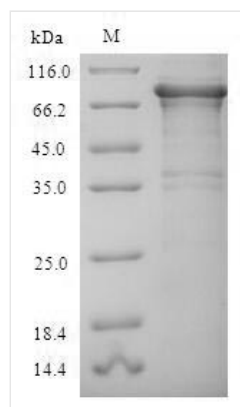
PRODUCT SYNONYMS

Replication protein A 70 kDa DNA-binding subunit (RPA1); Recombinant Human Replication protein A 70 kDa DNA-binding subunit (RPA1); Replication factor A protein 1; RF-A protein 1; Single-stranded DNA-binding protein; RPA1 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Sequence Positions	2-616aa; Full Length of Mature Protein
Sequence	VGQLSEGAIA AIMQKGDTNI KPILQVINIR PITTGNSPPR YRLMSDGLN TLSSFMLATQ LNPLVEEEQL SSNCVCQIHR FIVNTLKDGR RVVILMELEV LKSAEAVGVK IGPNVPYNEL LGQPQVAPPA PAASPAASSR PQPQNGSSGM GSTVSKAYGA SKTFGKAAGP SLSHTSGGTQ SKVVPIASLT PYQSKWTICA RVTNKSQIRT WSNSRGEGKL FSLELVDESG EIRATAFNEQ VDKFFPLIEV NKVYYFSKGT LKIANKQFTA VKNDYEMTFN NETSVMPCED DHHLPTVQFD FTGIDDLNEN SKDSLVDIIG ICKSYEDATK ITVRSNNREV AKRNIYLMdT SGKVVATLW GEDADKFDGS RQPVLAIKGA RVSDFGGRSL SVLSSTIIA NPDIEAYKL RGWFDAEGQA LDGVSISDLK SGGVGSNTN WKTLYEVKSE NLGQGDKPDY FSSVATVVYL RKENCMYQAC PTQDCNKKVI DQQNGLYRCE KCDTEFPNFK YRMILSVNIA DFQENQWVTC FQESAEAILG QNAAYLGELK DKNEQAFEEV FQANFRSFI FRVRVKVETY NDESRIKATV MDVKPVDYRE YGRRLVMSIR RSALM
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for RPA1 recombinant protein	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. Through RFW3 may activate CHEK1 and play a role in replication checkpoint control. Also recruits SMARCAL1/HARP, which is involved in replication fork restart, to sites of DNA damage. May also play a role in telomere maintenance. 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
Product Categories/Family for RPA1 recombinant protein	Epigenetics and Nuclear Signaling
References	Characterization of a cDNA encoding the 70-kDa single-stranded DNA-binding subunit of human replication protein A and the role of the protein in DNA replication.Erdile L.F., Heyer W.-D., Kolodner R., Kelly T.J.J. Biol. Chem. 266:12090-12098(1991) Type I human complement C2 deficiency. A 28-base pair gene deletion causes skipping of exon 6 during RNA splicing.Erdile L.F., Heyer W.-D., Kolodner R., Kelly T.J.J. Biol. Chem. 268:2268-2268(1993) Complete sequencing and characterization of 21,243 full-length human cDNAs.Ota T., Suzuki Y., Nishikawa T., Otsuki T., Sugiyama T., Irie R., Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H., Sekine M., Obayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S., Yamamoto J., Saito K., Kawai Y., Isono Y., Nakamura Y., Nagahari K., Murakami K., Yasuda T., Iwayanagi T., Wagatsuma M., Shiratori A., Sudo H., Hosoiri T., Kaku Y., Kodaira H., Kondo H., Sugawara M., Takahashi M., Kanda K., Yokoi T., Furuya T., Kikkawa E., Omura Y., Abe K., Kamihara K., Katsuta N., Sato K., Tanikawa M., Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K., Fujimori K., Tanai H., Kimata M., Watanabe M., Hiraoka S., Chiba Y., Ishida S., Ono Y., Takiguchi S., Watanabe S., Yosida M., Hotuta T., Kusano J., Kanehori K., Takahashi-Fujii A., Hara H., Tanase T.-O., Nomura Y., Togiya S., Komai F., Hara R., Takeuchi K., Arita M., Imose N., Musashino K., Yuuki H., Oshima A., Sasaki N., Aotsuka S., Yoshikawa Y., Matsunawa H., Ichihara T., Shiohata N., Sano S., Moriya S., Momiyama H., Satoh N., Takami S., Terashima Y., Suzuki O., Nakagawa S., Senoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H., Hishigaki H., Watanabe T., Sugiyama A., Takemoto M., Kawakami B., Yamazaki M., Watanabe K., Kumagai A., Itakura S., Fukuzumi Y., Fujimori Y., Komiyama M., Tashiro H., Tanigami A., Fujiwara T., Ono T., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y., Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S., Okitani R., Kawakami T., Noguchi S., Itoh T., Shigeta K., Senba T., Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Sasaki M., Togashi T., Oyama M., Hata H., Watanabe M., Komatsu T., Mizushima-Sugano J., Satoh T., Shirai Y., Takahashi Y., Nakagawa K., Okumura K., Nagase T., Nomura N., Kikuchi H., Masuho Y., Yamashita R., Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.Nat. Genet. 36:40-45(2004) Totoki Y., Toyoda A., Takeda T., Sakaki Y., Tanaka A., Yokoyama S., Ohara O., Nagase T., Kikuno R.F. NIEHS SNPs program

NCBI AND UNIPROT INFORMATION

NCBI GI #	4506583
NCBI GeneID	6117
NCBI Accession #	NP_002936.1
NCBI GenBank Nucleotide #	NM_002945.3
UniProt Accession #	P27694; Q59ES9; A8K0Y9
Molecular Weight	84 kDa
NCBI Official Full Name	replication protein A 70 kDa DNA-binding subunit
NCBI Official Synonym Full Names	replication protein A1

NCBI Official Symbol	RPA1
NCBI Official Synonym Symbols	HSSB; RF-A; RP-A; REPA1; RPA70; MST075
NCBI Protein Information	replication protein A 70 kDa DNA-binding subunit
UniProt Protein Name	Replication protein A 70 kDa DNA-binding subunit
UniProt Gene Name	RPA1
UniProt Synonym Gene Names	REPA1; RPA70; RP-A p70; RF-A protein 1
UniProt Entry Name	RFA1_HUMAN

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://www.aaabiotech.com/rpa1-recombinant-protein-e-coli/18520>