

Recombinant Human RPA1 protein, His-tagged

Cat. No. RPA1-3848H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human RPA1 protein(NP_001342049.1)(1-317 aa), fused to His Tag at the N-terminus, was expressed in E.coli.

Species Human

Source E.coli

ProteinLength 1-317 aa

Description

This gene encodes the largest subunit of the heterotrimeric Replication Protein A (RPA) complex, which binds to single-stranded DNA (ssDNA), forming a nucleoprotein complex that plays an important role in DNA metabolism, being involved in DNA replication, repair, recombination, telomere maintenance, and co-ordinating the cellular response to DNA damage through activation of the ataxia telangiectasia and Rad3-related protein (ATR) kinase. The nucleoprotein complex protects the single-stranded DNA from nucleases, prevents formation of secondary structures that would interfere with repair, and co-ordinates the recruitment and departure of different genome maintenance factors. This subunit contains four oligonucleotide/oligosaccharide-binding (OB) domains, though the majority of ssDNA binding occurs in two of these domains. The heterotrimeric complex has two different modes of ssDNA binding, a low-affinity and high-affinity mode, determined by which ssDNA binding domains are utilized. The different binding modes differ in the length of DNA bound and in the proteins with which it interacts, thereby playing a role in regulating different genomic maintenance pathways.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

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Form	Lyophilized from sterile PBS (58mM Na ₂ HPO ₄ , 17mM NaH ₂ PO ₄ , 68mM NaCl, pH8.). 5 % trehalose and 5 % mannitol are added as protectants before lyophilization.
Bio-activity	Not tested.
AA Sequence	MVGQLSEGAIAAIMQKGDNIKPIQVINIRPITGNSPPRYRLLMSDGLNLTSSFMLA TQLNPLVEEEQLSSNCVCQIHRFIVNTLKDGRVVILMELEVLKSAEAVGVKIGNPVP YNEGLGQPQVAPPAPAASPAASSRPQPQNGSSGMGSTVSKAYGASKTFGKAAGP SLSHTSGGTQSKVVPIASLTPYQSKWTICARVTNKSQIRTWNSRGEKLFSLLELVD ESGEIRATAFNEQVDKFFPLIEVKNKVVYFSGKTLKIANKQFTAVKNDYEMTFNNETSV MPCEDDHHLPTVQFDFTGIDDLENKSKDSL
Endotoxin	Please contact the lab for more information.
Purity	85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Stability	Store for up to 12 months at -20°C to -80°C as lyophilized powder.
Storage	Short-term storage: Store at 2-8°C for (1-2 weeks). Long-term storage: Aliquot and store at -20°C to -80°C for up to 3 months, buffer containing 50% glycerol is recommended for reconstitution. Avoid repeat freeze-thaw cycles.
Reconstitution	Reconstitute at 0.25 g/μl in 200 μl sterile water for short-term storage. Reconstitution with 200 μl 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash

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down the sides of the vial to ensure full recovery of the protein into solution.

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature (see below).

GENE INFORMATION

Gene Name [RPA1 replication protein A1 \[Homo sapiens \(human\) \]](#)

Official Symbol [RPA1](#)

Synonyms [HSSB](#); [MST075](#); [REPA1](#); [RF-A](#); [RP-A](#); [RPA70](#)

Gene ID [6117](#)

mRNA Refseq [NM_002945.5](#)

Protein Refseq [NP_002936.1](#)

MIM [179835](#)

UniProt ID [P27694](#)

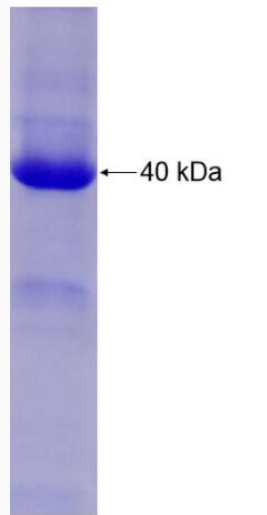
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SDS-PAGE of RPA1-3848H



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