Recombinant Human RPA1 Protein, His&GST-tagged

Cat. No. RPA1-2030H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human RPA1 Protein (Asp18-Pro403) with N-His&GST tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Asp18-Pro403
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.

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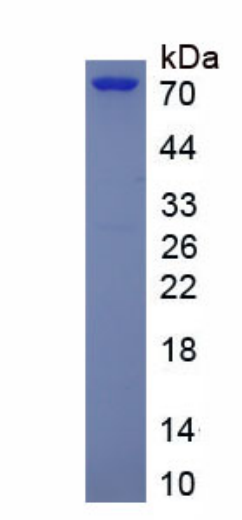
Form	Freeze-dried powder
Molecular Mass	Predicted Molecular Mass: 72 kDa
Purity	> 97%
Applications	Positive Control; Immunogen; SDS-PAGE; WB.
Stability	The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 centigrade for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and store at -80 centigrade for 12 months.
Storage Buffer	PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	RPA1 replication protein A1, 70kDa [Homo sapiens (human)]
Official Symbol	RPA1
Synonyms	RPA1; replication protein A1, 70kDa; replication protein A1 (70kD); replication protein A 70 kDa DNA-binding subunit; HSSB; REPA1; RF A; RP A; RPA70; MSTP075; RP-A p70; RF-A protein 1; replication factor A protein 1; single-stranded DNA-binding protein; RF-A; RP-A; MST075;

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Gene ID	6117
mRNA Refseq	NM_002945
Protein Refseq	NP_002936
MIM	179835
UniProt ID	P27694



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