

Recombinant Full Length Human RPA1 Protein, C-Flag-tagged

Cat. No. RPA1-685HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Full Length Human RPA1 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian Cells
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.
Form	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.

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Molecular Mass	68 kDa
AA Sequence	MVGQLSEGAIAAIMQKGDNIKPILQVINIRPITGNSPPRYRLLMSDGLNTLSSFMLA TQLNPLVEEEQ LSSNCVCQIHRFIVNTLKDGRRVVILMEVLKSAEAVGVKIGNPVP YNEGLGQPQVAPPAPAASPAASS RPQPQNGSSGMGSTVSKAYGASKTFGKAAGP SLSHTSGGTQSKVVPIASLTPYQSKWTICARVTNKSQIR TWSNSRGEGLFSLELVD ESGEIRATAFNEQVDKFFPLIEVNKVYYFSKGTALKIANKQFTAVKNDYEMTF NNETS VMPCEDDHHLPTVQFDFTGIDDLNENKSKDSLVDIIGICKSYEDATKITVRSNNREVAK RNIYLM TSGKVVTATLWGEDADKFDGSRQPVLAIKGARVSDFGGRSLSVLSSSTII ANPDIPEAYKLRGWFDAEGQ ALDGVVISDLKSGGVGGSNTNWKTLYEYKSENLGQ GDKPDYFSSVATVVYLRKENCMYQACPTQDCNKKV IDQQNGLYRCEKCDTEFPNF KYRMILSVNIADFQENQWVTCFQESAEAILGQNAAYLGELKDKNEQAFEE VFQANANFRSFIFRVRVKVETYNDESRIKATVMDVKPVDYREYGRRLVMSIRRSALMT RTRPLEQKLISEEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining.
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade.
Concentration	>50 ug/mL as determined by microplate BCA method.
Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Protein Families	Druggable Genome, Stem cell - Pluripotency
Protein Pathways	DNA replication, Homologous recombination, Mismatch repair, Nucleotide excision

repair

Full Length

Full L.

GENE INFORMATION

Gene Name

RPA1 replication protein A1 [Homo sapiens (human)]

Official Symbol

RPA1

Synonyms

HSSB; RF-A; RP-A; REPA1; RPA70; MST075; PFBMFT6

Gene ID

6117

mRNA Refseq

NM_002945.5

Protein Refseq

NP_002936.1

MIM

179835

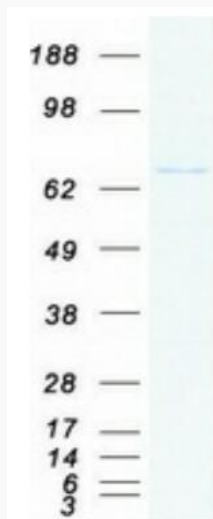
UniProt ID

P27694

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Coomassie blue staining of purified RPA1 protein.