



**LD Biopharma, Inc.**  
9924 Mesa Rim Road Suite B  
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<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human RPA2 Protein  
**Catalog Number:** hRP-0770  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

The RPA complex, consisted of three subunits of RPA1, RPA2 and RPA3 (70, 34 and 11 kDa, respectively), has been identified as a cellular factor that plays an essential role in SV40 DNA replication in vitro. It has been shown that RPA plays roles in the DNA transactions of DNA replication, transcription and recombination in eukaryotic cells by interacting with single-stranded DNA. Recently, human replication protein A 32 kDa subunit (RPA2) has been identified for interaction with many DNA replication key factors, and involved in various cancer developments.

Full-length human RPA2 (270aa) gene was constructed with 15aa N-terminal T7 tag and expressed in E.coli as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** RPA2 (REPA2; RPA32)  
**Accession Number:** NP\_002937  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, sucrose and DTT.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

### Key References

Kanakis,D., et al., *Replication protein A: a reliable biologic marker of prognostic and therapeutic value in human astrocytic tumors.*  
Hum. Pathol. 42 (10), 1545-1553 (2011)



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Levidou,G., et al., *Prognostic significance of replication protein A (RPA) expression levels in bladder urothelial carcinoma*. BJU Int. 108 (2 PT 2), E59-E65 (2011)

Liaw,H., et al.,*DNA-PK-dependent RPA2 hyperphosphorylation facilitates DNA repair and suppresses sister chromatid exchange*. PLoS ONE 6 (6), E21424 (2011)

Nakaya,R., et al., *Identification of proteins that may directly interact with humanRPA*. J. Biochem. 148 (5), 539-547 (2010)

## **Applications**

1. May be used for in vitro DNA replication regulation study with intracellular protein delivery of this protein.
2. As soluble/native protein, may be used as enzymatic substrate protein for ubiquitin assay.
3. May be used for mapping protein–protein interaction assay development.
4. May be used as antigen for specific antibody development and potential cancer diagnostic development.

## **Quality Control**

1. Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

MASMTGGQQMGRGEFMWNSGFESYGSSSYGGAGGYTQSPGGFGSPAPSAEKKSRARAQHIVPC  
TISQLLSATLVDEVFRIGNVEISQVTIVGIIRHAEKAPTNIIVYKIDDMTAAAPMDVRQWVDTDDT  
SSENTVVPPEYVVKVAGHLRSFQNKKSLVAFKIMPLEDMNEFTTHILEVINAHMVLSKANSQPS  
AGRAPISNPGMSEAGNFGNSFMPANGLTVAQNQVLNLIKACPRPEGLNFQDLKNQLKHMSVSS  
IKQAVDFLSNEGHIYSTVDDDDHFKSTDAE