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# RPA1 Protein (AA 2-623) (His tag)



**Image** 



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#### Overview

Quantity:	1 mg
Target:	RPA1
Protein Characteristics:	AA 2-623
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This RPA1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

#### **Product Details**

Sequence:

VGHLSEGAIE VMIQQENTSI KPILQVINIR PISTGNRSPR YRLLMSDGLN TLSSFMLATQ
LNTLVEGGQL ASNCVCQVHK FIVNTLKDGR KVVVLMDLEV MKSAEDVGLK IGNPVPYNEG
YGQQQQQQQ QQQQAVPSPA SAATPPASKP QPQNGSLGMG STAAKAYGAS KPFGKPAGTG
LLQPSGGTQS KVVPIASLTP YQSKWTICAR VTNKSQIRTW SNSRGEGKLF SLELVDESGE
IRATAFNEQV DKFFPLIEVN KVYYFSKGAL KIANKQFSAV KNDYEMTFNN ETSVLPCEDG
HHLPTVQFDF TGIGDLESKA KDALVDIIGI CKSYEDSIKI TVKSNNREVA KRNIYLMDMS
GKVVTTTLWG EDADKFDGSR QPVMAIKGAR VSDFGGRSLS VLSSSTVIVN PDIPEAYKLR
GWFDSEGQAL DGVSISDHRS GGAGGGNTNW KTLHEAKSEN LGQGDKADYF STVAAVVFLR
KENCMYQACP TQDCNKKVID QQNGLYRCEK CDREFPNFKY RMILSANIAD FQENQWVTCF
QESAEAILGQ NTMYLGELKE KNEQAFEEVF QNANFRSFTF RIRVKLETYN DESRIKATVM
DVKPVDFRDY GRRLIANIRK NM

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a

# **Product Details** special request, please contact us. Characteristics: · Made in Germany - from design to production - by highly experienced protein experts. · Mouse Rpa1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein. Purification: Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step

through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot. Purity: 0.22 µm filtered Sterility: Endotoxin Level: Protein is endotoxin free. Grade: Crystallography grade

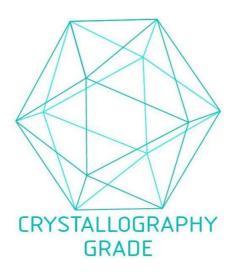
# **Target Details**

Target:	RPA1
Alternative Name:	Rpa1 (RPA1 Products)
Background:	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 RFWD3 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.
	{ECO:0000250 UniProtKB:P27694}.
Molecular Weight:	69.9 kDa Including tag.
UniProt:	Q8VEE4
Pathways:	Telomere Maintenance, DNA Damage Repair, Mitotic G1-G1/S Phases, DNA Replication,
	Chromatin Binding, Synthesis of DNA
Application Details	
Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies
	as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee
	though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the
	recombinant protein with the default tag will be insoluble our protein lab may suggest a higher
	molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible
	options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

### Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

# Images



**Image 1.** "Crystallography Grade" protein due to multi-step, protein-specific purification process