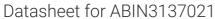
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RPA3 Protein (AA 2-121) (His tag)



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Quantity:	1 mg
Target:	RPA3
Protein Characteristics:	AA 2-121
Origin:	Mouse
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This RPA3 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), ELISA, Western Blotting (WB), Crystallization (Crys)
Product Details	
Sequence:	EDIMQLPKAR VNASMLPQYI DRPVCFVGKL EKIHPTGKMF ILSDGEGKNG TIELMEPLDE
	EISGIVEVVG KVTAKATVLC ASYTLFKEDT NRFDLELYNE AVKIINELPQ FFPVGLPQHE
	Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a
	special request, please contact us.
Characteristics:	 Made in Germany - from design to production - by highly experienced protein experts. Mouse Rpa3 Protein (raised in E. Coli) 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 bacterial culture:

- 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.
- 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.

Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Endotoxin Level:

Endotoxin has not been removed. Please contact us if you require endotoxin removal.

Grade:

Crystallography grade

Target Details

Target:	RPA3
Alternative Name:	Rpa3 (RPA3 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. RPA3 has	
its own single-stranded DNA-binding activity and may be responsible for polarity of the binding	
of the complex to DNA. {ECO:0000250 UniProtKB:P35244}.	

Molecular Weight:	14.4 kDa Including tag.	
UniProt:	Q9CQ71	
Pathways:	Telomere Maintenance, DNA Damage Repair, Mitotic G1-G1/S Phases, DNA Replication, 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