Datasheet for ABIN3086804

RAD51AP1 Protein (AA 1-352) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	RAD51AP1
Protein Characteristics:	AA 1-352
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This RAD51AP1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MVRPVRHKKP VNYSQFDHSD SDDDFVSATV PLNKKSRTAP KELKQDKPKP NLNNLRKEEI PVQEKTPKKR LPEGTFSIPA SAVPCTKMAL DDKLYQRDLE VALALSVKEL PTVTTNVQNS QDKSIEKHGS SKIETMNKSP HISNCSVASD YLDLDKITVE DDVGGVQGKR KAASKAAAQQ RKILLEGSDG DSANDTEPDF APGEDSEDDS DFCESEDNDE DFSMRKSKVK EIKKKEVKVK SPVEKKEKKS KSKCNALVTS VDSAPAAVKS ESQSLPKKVS LSSDTTRKPL EIRSPSAESK KPKWVPPAAS GGSRSSSSPL VVVSVKSPNQ SLRLGLSRLA RVKPLHPNAT ST **Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Characteristics:	Key Benefits: • Made in Germany - from design to production - by highly experienced protein experts. • Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure

correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- 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.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. 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.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Product Details

Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	RAD51AP1
Alternative Name:	RAD51AP1 (RAD51AP1 Products)
Background:	RAD51-associated protein 1 (HsRAD51AP1) (RAD51-interacting protein),FUNCTION: Structure-specific DNA-binding protein involved in DNA repair by promoting RAD51-mediated homologous recombination (PubMed:17996710, PubMed:17996711, PubMed:20871616, PubMed:25288561, PubMed:26323318). Acts by stimulating D-Loop formation by RAD51: specifically enhances joint molecule formation through its structure-specific DNA interaction and its interaction with RAD51 (PubMed:17996710, PubMed:17996711). Binds single-stranded DNA (ssDNA), double-stranded DNA (dsDNA) and secondary DNA structures, such as D-loop structures: has a strong preference for branched-DNA structures that are obligatory intermediates during joint molecule formation (PubMed:9396801, PubMed:17996711, PubMed:22375013, PubMed:17996710). Cooperates with WDR48/UAF1 to stimulate RAD51-mediated homologous recombination: both WDR48/UAF1 and RAD51AP1 have coordinated role in DNA-binding during homologous recombination and DNA repair (PubMed:27463890, PubMed:27239033, PubMed:32350107). WDR48/UAF1 and RAD51AP1 also have a coordinated role in DNA-binding to promote USP1-mediated deubiquitination of FANCD2 (PubMed:31253762). Also involved in meiosis by promoting DMC1-mediated homologous meiotic recombination (PubMed:21307306). Key mediator of alternative lengthening of telomeres (ALT) pathway, a homology-directed repair mechanism of telomere elongation that controls proliferation in aggressive cancers, by stimulating homologous recombination (PubMed:31400850). May also bind RNA, additional evidences are however required to confirm RNA-binding in vivo (PubMed:9396801). {ECO:0000269|PubMed:17996710, ECO:0000269|PubMed:17996711, ECO:0000269|PubMed:20871616, ECO:0000269|PubMed:21307306, ECO:0000269|PubMed:22375013, ECO:0000269|PubMed:25288561, ECO:0000269|PubMed:26323318, ECO:0000269|PubMed:27239033, ECO:0000269|PubMed:27463890, ECO:0000269|PubMed:31253762, ECO:0000269|PubMed:31400850, ECO:0000269|PubMed:32350107, ECO:0000269|PubMed:9396801}.
Molecular Weight:	38.5 kDa
UniProt:	Q96B01

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 guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)