

Datasheet for ABIN3094930

**RAD21 Protein (AA 1-631) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	RAD21
Protein Characteristics:	AA 1-631
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This RAD21 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence:	MFYAHFVLSK RGPLAKIWLA AHWDKKLTKA HVFECNLESS VESIISPKVK MALRTSGHLL LGVVRIYHRK AKYLLADCNE AFIIKMAFR PGVVDLPEEN REAAYNAITL PEEFHDFDQP LPDLDDIDVA QQFSLNQSRV EEITMREEVG NISILQENDF GDFGMDDREI MREGSAFEDD DMLVSTTTSN LLESEQSTS NLNEKINHLE YEDQYKDDNF GEGNDGGILD DKLISNNDGG IFDDPPALSE AGVMLPEQPA HDDMDEDDNV SMGGPDSPDS VDPVEPMPTM TDQTTLVPNE EEAFALPID ITVKETKAKR KRKLIVDSVK ELDSKTIRAQ LSDYSDIVTT LDLAPPTKKL MMWKETGGVE KLFSLPAQPL WNNRLLKLFT RCLTPLVPED LRKRRKGGEA DNLDEFLKEF ENPEVPREDQ QQQHQQRDVI DEPIIEEPSR LQESVMEASR TNIDESAMPP PPPQGVKRKA GQIDPEPVMP PQQVEQMEIP PVLPPEEPP NICQLIPELE LLPEKEKEKE KEKEDDEEEE DEDASGGDQD QEERRWNKRT QQMLHGLQRA LAKTGAESIS LLELCRNTNR KQAAAKFYSF LVLKKQQAIE LTQEEPYSI IATPGPRFHI I
-----------	---

**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

## Product Details

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

## Target Details

Target:	RAD21
Alternative Name:	RAD21 ( <a href="#">RAD21 Products</a> )
Background:	<p>Double-strand-break repair protein rad21 homolog (hHR21) (Nuclear matrix protein 1) (NXP-1) (SCC1 homolog) [Cleaved into: 64- kDa C-terminal product (64- kDa carboxy-terminal product) (65- kDa carboxy-terminal product)],FUNCTION: [Double-strand-break repair protein rad21 homolog]: As a member of the cohesin complex, involved in sister chromatid cohesion from the time of DNA replication in S phase to their segregation in mitosis, a function that is essential for proper chromosome segregation, post-replicative DNA repair, and the prevention of inappropriate recombination between repetitive regions (PubMed:11509732). The cohesin complex may also play a role in spindle pole assembly during mitosis (PubMed:11590136). In interphase, cohesins may function in the control of gene expression by binding to numerous sites within the genome (By similarity). May control RUNX1 gene expression (Probable). Binds to and represses APOB gene promoter (PubMed:25575569). May play a role in embryonic gut development, possibly through the regulation of enteric neuron development (By similarity). {ECO:0000250 UniProtKB:Q61550, ECO:0000250 UniProtKB:Q6TEL1, ECO:0000269 PubMed:11509732, ECO:0000269 PubMed:11590136, ECO:0000269 PubMed:25575569, ECO:0000305 PubMed:25575569}., FUNCTION: [64- kDa C-terminal product]: May promote apoptosis. {ECO:0000269 PubMed:11875078, ECO:0000269 PubMed:12417729}.</p>
Molecular Weight:	71.7 kDa
UniProt:	<a href="#">O60216</a>
Pathways:	<a href="#">Positive Regulation of Endopeptidase Activity</a>

## 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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
----------	--

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)



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