

Datasheet for ABIN3078650

**DCAF13 Protein (AA 1-445) (Strep Tag)****1** Image[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	DCAF13
Protein Characteristics:	AA 1-445
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DCAF13 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

## Product Details

Sequence: MKVKMLSRNP DNYVRETKLD LQRVPRNYDP ALHPFEVPRE YIRALNATKL ERVFAKPFLA  
SLDGHHRDGVN CLAKHPEKLA TVLSGACDGE VRIWNLTQRN CIRTIQAHEG FVRGICTRFC  
GTSFFTVGDD KTVKQWKMDG PGYGDEEEPL HTILGKTVYT GIDHHWKEAV FATCGQQVDI  
WDEQRTNPIC SMTWGFDSIS SVKFNPIETF LLGSCASDRN IVLYDMRQAT PLKKVILDMR  
TNTICWNPME AFIFTAANED YNLYTFDMRA LDTPVMVHMD HVSAVLDVDY SPTGKEFVSA  
SFDKSIRIFP VDKSRSREVY HTKRMQHVIC VKWTSDSKYI MCGSDEMNIR LWKANASEKL  
GVLTSREKAA KDYNQKLKEK FQHYPHIKRI ARHRHLPKSI YSQUIEQRIM KEARRRKEVN  
RIKHSKPGSV PLVSEKKKKHV VAVVK

**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:
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- 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.

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### 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.

## Product Details

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:	DCAF13
Alternative Name:	DCAF13 ( <a href="#">DCAF13 Products</a> )
Background:	<p>DDB1- and CUL4-associated factor 13 (WD repeat and SOF domain-containing protein 1),FUNCTION: Part of the small subunit (SSU) processome, first precursor of the small eukaryotic ribosomal subunit. During the assembly of the SSU processome in the nucleolus, many ribosome biogenesis factors, an RNA chaperone and ribosomal proteins associate with the nascent pre-rRNA and work in concert to generate RNA folding, modifications, rearrangements and cleavage as well as targeted degradation of pre-ribosomal RNA by the RNA exosome (PubMed:34516797). Participates in the 18S rRNA processing in growing oocytes, being essential for oocyte nonsurrounded nucleolus (NSN) to surrounded nucleolus (SN) transition (PubMed:30283081). {ECO:0000269 PubMed:30283081, ECO:0000269 PubMed:34516797}., FUNCTION: Substrate-recognition component of a DCX (DDB1-CUL4-X-box) E3 ubiquitin-protein ligase complex that plays a key role in embryo preimplantation and is required for normal meiotic cycle progression in oocytes (PubMed:16949367, PubMed:30111536, PubMed:31492966). Acts as a maternal factor that regulates oocyte and zygotic chromatin tightness during maternal to zygotic transition (By similarity). Also involved in the transformation of the endometrium into the decidua, known as decidualization, providing a solid foundation for implantation of blastocysts (PubMed:35932979). Recognizes the histone methyltransferases SUV39H1 and SUV39H2 and directs them to polyubiquitination and proteasomal degradation, which facilitates the H3K9me3 removal and early zygotic gene expression, essential steps for progressive genome reprogramming and the establishment of pluripotency during preimplantation embryonic development (PubMed:30111536). Supports the spindle assembly and chromosome condensation during oocyte meiotic division by targeting the polyubiquitination and degradation of PTEN, a lipid phosphatase that inhibits PI3K pathway as well as oocyte growth and maturation (PubMed:31492966). Targets PMP22 for polyubiquitination and proteasomal degradation (By similarity). {ECO:0000250 UniProtKB:Q6PAC3, ECO:0000269 PubMed:16949367, ECO:0000269 PubMed:30111536, ECO:0000269 PubMed:31492966, ECO:0000269 PubMed:35932979}.</p>

## Target Details

Molecular Weight: 51.4 kDa

UniProt: [Q9NV06](#)

## 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.

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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