



[Go to Product page](#)

Datasheet for ABIN3089981  
**BBS2 Protein (AA 1-721) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	BBS2
Protein Characteristics:	AA 1-721
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This BBS2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Sequence: MLLPVFTLKL RHKISPRMVA IGRYDGTGTHPC LAAATQTGKV FIHNPHTRNQ HVSASRVFQS  
PLESDVSLLS INQAVSCLTA GVLNPELGYD ALLVGTQTNL LAYDVYNNSD LFYREVADGA  
NAIVLGLTGD ISSPLAIGG NCALQGFNHE GSDLFWVTG DNVNSLALCD FDGDGKKELL  
VGSEDFDIRV FKEDEIVAEM TETEIVTSLC PMYGSRFGYA LSNGTGVGYD KTSRYWRIKS  
KNHAMSIHAF DLNSDGVNEL ITGWSNGKVD ARSDRTGEVI FKDNFSSAIA GVVEGDYRMD  
GHIQLICCSV DGEIRGYLPG TAEMRGNLMD TSAEQDLIRE LSQKKQNLLL ELRNYEENAK  
AELASPLNEA DGHARGIIPAN TRLHTTLSVS LGNETQTAHT ELRISTSNDT IIRAVLIFAE  
GIFTGESHVV HPSIHNLSST ICIPVPPKD VPVDLHLKAF VGYRSSTQFH VFESTRQLPR  
FSMYALTS LD PASEPISYVN FTIAERAQRV VVWLGQNFL PEDTHIQNAP FQVCFTSLRN  
GGHLHIKIKL SGEITINTDD IDLAGDIIQS MASFFAIEDL QVEADFPVYF EELRKVLVKV  
DEYHSVHQKL SADMADHSNL IRSLLVGAED ARLMRDMKTM KSRYMELYDL NRDLLNGYKI  
RCNNHTELLG NLKAVNQAIQ RAGRLRVGKP KNQVITACRD AIRSNNINTL FKIMRVGTAS S

**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.**

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### 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®):

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## Product Details

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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.

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Purity: >80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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

## Target Details

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Target: BBS2

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Alternative Name: BBS2 ([BBS2 Products](#))

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Background: Bardet-Biedl syndrome 2 protein,FUNCTION: The BBSome complex is thought to function as a coat complex required for sorting of specific membrane proteins to the primary cilia. The BBSome complex is required for ciliogenesis but is dispensable for centriolar satellite function. This ciliogenic function is mediated in part by the Rab8 GDP/GTP exchange factor, which localizes to the basal body and contacts the BBSome. Rab8(GTP) enters the primary cilium and promotes extension of the ciliary membrane. Firstly the BBSome associates with the ciliary membrane and binds to RAB3IP/Rabin8, the guanosyl exchange factor (GEF) for Rab8 and then the Rab8-GTP localizes to the cilium and promotes docking and fusion of carrier vesicles to the base of the ciliary membrane. The BBSome complex, together with the LTZL1, controls SMO ciliary trafficking and contributes to the sonic hedgehog (SHH) pathway regulation. Required for proper BBSome complex assembly and its ciliary localization.  
{ECO:0000269|PubMed:17574030, ECO:0000269|PubMed:22072986}.

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Molecular Weight: 79.8 kDa

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UniProt: [Q9BXC9](#)

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Pathways: [Hedgehog Signaling](#)

## Application Details

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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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Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from

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## Application Details

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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!

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Restrictions: For Research Use only

## Handling

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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)