

Datasheet for ABIN3080928  
**GPS2 Protein (AA 1-327) (Strep Tag)**[Go to Product page](#)

## 1 Image

## Overview

Quantity:	1 mg
Target:	GPS2
Protein Characteristics:	AA 1-327
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This GPS2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence: MPALLERPKL SNAMARALHR HIMMERERKR QEEEEVDKMM EQKMKEEQER RKKKEMEERM  
SLEETKEQIL KLEEKLLALQ EEKHQLFLQL KKVLEHEEEKR RRKEQSDLTT LTSAAYQQSL  
TVHTGTHLLS MQGSPGGHNR PGTLMADRA QMFGPQVLT TRHYVGSAAA FAGTPEHGQF  
QGSPGGAYGT AQPPPHYGPT QPAYSPSQQ L RAPSAPAVQ YLSQPQPQPY AVHGHFQPTQ  
TGFLQPGGAL SLQKQMEHAN QQTGFSDSSS LRPMHPQALH PAPGLLASPQ LPVQMMPAGK  
SGFAATSQPG PRLPFIQHSQ NPRFYHK

**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: <ul style="list-style-type: none"><li>• Made in Germany - from design to production - by highly experienced protein experts.</li><li>• Protein expressed with ALICE® and purified by multi-step, protein-specific process to ensure</li></ul>
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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.

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Purity:

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

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## Product Details

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

Grade: Crystallography grade

## Target Details

Target: GPS2

Alternative Name: GPS2 ([GPS2 Products](#))

Background: G protein pathway suppressor 2 (GPS-2),FUNCTION: Key regulator of inflammation, lipid metabolism and mitochondrion homeostasis that acts by inhibiting the activity of the ubiquitin-conjugating enzyme UBE2N/Ubc13, thereby inhibiting 'Lys-63'-linked ubiquitination (By similarity). In the nucleus, can both acts as a corepressor and coactivator of transcription, depending on the context (PubMed:24943844). Acts as a transcription coactivator in adipocytes by promoting the recruitment of PPARG to promoters: acts by inhibiting the activity of the ubiquitin-conjugating enzyme UBE2N/Ubc13, leading to stabilization of KDM4A and subsequent histone H3 'Lys-9' (H3K9) demethylation (By similarity). Promotes cholesterol efflux by acting as a transcription coactivator (PubMed:19481530). Acts as a regulator of B-cell development by inhibiting UBE2N/Ubc13, thereby restricting the activation of Toll-like receptors (TLRs) and B-cell antigen receptors (BCRs) signaling pathways (By similarity). Acts as a key mediator of mitochondrial stress response: in response to mitochondrial depolarization, relocates from the mitochondria to the nucleus following desumoylation and specifically promotes expression of nuclear-encoded mitochondrial genes (PubMed:29499132). Promotes transcription of nuclear-encoded mitochondrial genes by inhibiting UBE2N/Ubc13 (PubMed:29499132). Can also act as a corepressor as part of the N-Cor repressor complex by repressing active PPARG (PubMed:19858209, PubMed:24943844). Plays an anti-inflammatory role in macrophages and is required for insulin sensitivity by acting as a corepressor (By similarity). Plays an anti-inflammatory role during the hepatic acute phase response by interacting with sumoylated NR1H2 and NR5A2 proteins, thereby preventing N-Cor corepressor complex dissociation (PubMed:20159957). In the cytosol, also plays a non-transcriptional role by regulating insulin signaling and pro-inflammatory pathways (By similarity). In the cytoplasm, acts as a negative regulator of inflammation by inhibiting the pro-inflammatory TNF-alpha pathway, acts by repressing UBE2N/Ubc13 activity (By similarity). In the cytoplasm of adipocytes, restricts the activation of insulin signaling via inhibition of UBE2N/Ubc13-mediated ubiquitination of AKT (By similarity). Able to suppress G-protein- and mitogen-activated protein kinase-mediated signal transduction (PubMed:8943324). Acts as a tumor-suppressor in liposarcoma (PubMed:27460081). {ECO:0000250|UniProtKB:Q921N8,

## Target Details

ECO:0000269|PubMed:19481530, ECO:0000269|PubMed:19858209,  
ECO:0000269|PubMed:20159957, ECO:0000269|PubMed:24943844,  
ECO:0000269|PubMed:27460081, ECO:0000269|PubMed:29499132,  
ECO:0000269|PubMed:8943324}, FUNCTION: (Microbial infection) Required for efficient  
replication of hepatitis C virus (HCV) by promoting the interaction between VAPA and HCV virus  
protein NS5A. {ECO:0000269|PubMed:24223774}.

Molecular Weight: 36.7 kDa

UniProt: [Q13227](#)

## 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.

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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.

## Handling

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Expiry Date: Unlimited (if stored properly)

## Images

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