

Datasheet for ABIN3119551

**CYP46A1 Protein (AA 1-500) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	CYP46A1
Protein Characteristics:	AA 1-500
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP46A1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence: MSPGLLLLGS AVLLAFGLCC TFVHRARSRY EHIPGPPRPS FLLGHLPCFW KKDEVGGRVL  
QDVFLDWAKK YGPVVRNVF HKTSVIVTSP ESVKKFLMST KYNKDSKMYR ALQTVFGERL  
FGQGLVSECN YERWHKQRRV IDLAFSRSSL VSLMETFNEK AEQLVEILEA KADGQTPVSM  
QDMLTYTAMD ILAKAAFGME TSMLLGAQKP LSQAVKLMLE GITASRNTLA KFLPGKRKQL  
REVRESIRFL RQVGRDWVQR RREALKRGEE VPADILTQIL KAEEGAQDDE GLLDNFVTFF  
IAGHETSANH LAFTVMELSR QPEIVARLQA EVDEVIGSKR YLDFEDLGR L QYLSQVLKES  
LRLYPPAWGT FRLL EETLI DGVRVPGNTP LLFSTYVMGR MDTYFEDPLT FNPDRFGPGA  
PKPRFTYFPF SLGHRSCIGQ QFAQMEVKVV MAKLLQRLEF RLVPGQRFGL QEATLKLPLD  
PVLCTLRPRG WQPAPPPPPC

**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.

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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

## Product Details

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:	CYP46A1
Alternative Name:	CYP46A1 ( <a href="#">CYP46A1 Products</a> )
Background:	<p>Cholesterol 24-hydroxylase (CH24H) (EC 1.14.14.25) (Cholesterol 24-monooxygenase) (Cholesterol 24S-hydroxylase) (Cytochrome P450 46A1),FUNCTION: P450 monooxygenase that plays a major role in cholesterol homeostasis in the brain. Primarily catalyzes the hydroxylation (with S stereochemistry) at C-24 of cholesterol side chain, triggering cholesterol diffusion out of neurons and its further degradation (PubMed:10377398, PubMed:14640697, PubMed:25017465, PubMed:18621681). By promoting constant cholesterol elimination in neurons, may activate the mevalonate pathway and coordinate the synthesis of new cholesterol and nonsterol isoprenoids involved in synaptic activity and learning (By similarity). Further hydroxylates cholesterol derivatives and hormone steroids on both the ring and side chain of these molecules, converting them into active oxysterols involved in lipid signaling and biosynthesis (PubMed:12077124, PubMed:14640697, PubMed:28190002). Acts as an epoxidase converting cholesta-5,24-dien-3beta-ol/desmosterol into (24S),25-epoxycholesterol, an abundant lipid ligand of nuclear NR1H2 and NR1H3 receptors shown to promote neurogenesis in developing brain (PubMed:25017465). May also catalyze the oxidative metabolism of xenobiotics, such as clotrimazole (PubMed:20667828).</p> <p>{ECO:0000250 UniProtKB:Q9WVK8, ECO:0000269 PubMed:10377398, ECO:0000269 PubMed:12077124, ECO:0000269 PubMed:14640697, ECO:0000269 PubMed:18621681, ECO:0000269 PubMed:20667828, ECO:0000269 PubMed:25017465, ECO:0000269 PubMed:28190002}.</p>
Molecular Weight:	56.8 kDa
UniProt:	<a href="#">Q9Y6A2</a>

## Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies
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## Application Details

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as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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### Comment:

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### Restrictions:

For Research Use only

## Handling

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### Format:

Liquid

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### Buffer:

The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

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### Handling Advice:

Avoid repeated freeze-thaw cycles.

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### Storage:

-80 °C

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### Storage Comment:

Store at -80°C.

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### Expiry Date:

Unlimited (if stored properly)



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