

Datasheet for ABIN3118313

**CYP4F12 Protein (AA 1-524) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	CYP4F12
Protein Characteristics:	AA 1-524
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP4F12 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence: MSLLSLPWLG LRPVATSPWL LLLLVGSWL LARILAWTYA FYNNCRRLQC FPQPPKRNWF  
WGHGLITPT EEGLKNSTQM SATYSQGFTV WLGPIIPFIV LCHPDTIRSI TNASAAIAPK  
DNLFIRFLKP WLGEILLSG GDKWSRHRM LTPAFHFNIL KSYITIFNKS ANIMLDKWQH  
LASEGSSRLD MFEHISLMTL DSLQKCIFS DSHCQERPSE YIATILELSA LVEKRSQHIL  
QHMDFLYYLS HDGRRFHRAC RLVHDFTDAV IRERRRTLPT QGIDFFKDK AKSKTLDFID  
VLLLSKDEDG KALSDEDIRA EADTFMFGGH DTTASGLSWV LYNLARHPEY QERCRQEVQE  
LLKDRDPKEI EWDDLAQLPF LTMCKESLR LHPPAPFISR CCTQDIVLPD GRVIPKGITC  
LIDIIGVHHN PTVWPDPEVY DPFRFPENS KGRSPLAFIP FSAGPRNCIG QAFAMAEMKV  
VLALMLLHFR FLPDHTPRR KLELIMRAEG GLWLRVEPLN VSLQ

**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:	CYP4F12
Alternative Name:	CYP4F12 ( <a href="#">CYP4F12 Products</a> )
Background:	Cytochrome P450 4F12 (EC 1.14.14.1) (CYP11B2),FUNCTION: A cytochrome P450 monooxygenase involved in the metabolism of endogenous polyunsaturated fatty acids (PUFAs). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (CPR, NADPH-ferrihemoprotein reductase). Catalyzes the hydroxylation of carbon hydrogen bonds, with preference for omega-2 position. Metabolizes (5Z,8Z,11Z,14Z)-eicosatetraenoic acid (arachidonate) toward 18-hydroxy arachidonate (PubMed:11162607). Catalyzes the epoxidation of double bonds of PUFAs such as docosapentaenoic and docosahexaenoic acids (PubMed:16112640). Has low omega-hydroxylase activity toward leukotriene B4 and arachidonate (PubMed:11162645). Involved in the metabolism of xenobiotics. Catalyzes the hydroxylation of the antihistamine drug ebastine (PubMed:11162645). {ECO:0000269 PubMed:11162607, ECO:0000269 PubMed:11162645, ECO:0000269 PubMed:16112640}.
Molecular Weight:	60.3 kDa
UniProt:	<a href="#">Q9HCS2</a>
Pathways:	<a href="#">Monocarboxylic Acid Catabolic Process</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.
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## Application Details

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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)

## Images



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