Datasheet for ABIN3118253

CYP4F11 Protein (AA 1-524) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	CYP4F11
Protein Characteristics:	AA 1-524
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP4F11 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), ELISA, Western Blotting (WB)

Product Details

Sequence:	MPQLSLSWLG LGPVAASPWL LLLLVGGSWL LARVLAWTYT FYDNCRRLQC FPQPPKQNWF WGHQGLVTPT EEGMKTLTQL VTTYPQGFKL WLGPTFPLLI LCHPDIIRPI TSASAAVAPK DMIFYGFLKP WLGDGLLLSG GDKWSRHRRM LTPAFHFNIL KPYMKIFNKS VNIMHDKWQR LASEGSARLD MFEHISLMTL DSLQKCVFSF ESNCQEKPSE YIAAILELSA FVEKRNQQIL LHTDFLYYLT PDGQRFRRAC HLVHDFTDAV IQERRCTLPT QGIDDFLKNK AKSKTLDFID VLLLSKDEDG KELSDEDIRA EADTFMFEGH DTTASGLSWV LYHLAKHPEY QEQCRQEVQE LLKDREPIEI EWDDLAQLPF LTMCIKESLR LHPPVPVISR CCTQDFVLPD GRVIPKGIVC LINIIGIHYN PTVWPDPEVY DPFRFDQENI KERSPLAFIP FSAGPRNCIG QAFAMAEMKV VLALTLLHFR ILPTHTEPRR KPELILRAEG GLWLRVEPLG ANSQ **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.**

Product Details

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®):

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:	CYP4F11
Alternative Name:	CYP4F11 (CYP4F11 Products)
Background:	Cytochrome P450 4F11 (CYPIVF11) (EC 1.14.14.1) (3-hydroxy fatty acids omega-hydroxylase CYP4F11) (Docosahexaenoic acid omega-hydroxylase) (EC 1.14.14.79) (Long-chain fatty acid omega-monooxygenase) (EC 1.14.14.80) (Phylloquinone omega-hydroxylase CYP4F11) (EC 1.14.14.78),FUNCTION: A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids and their oxygenated derivatives (oxylipins) (PubMed:24138531, PubMed:15364545, PubMed:18065749). 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) (PubMed:15364545, PubMed:18065749, PubMed:24138531). Catalyzes with high efficiency the oxidation of the terminal carbon (omega-oxidation) of 3-hydroxy fatty acids, such as 3-hydroxyhexadecanoic and 3-hydroxyoctadecanoic acids, likely participating in the biosynthesis of long-chain 3-hydroxydicarboxylic acids (PubMed:18065749, PubMed:19932081). Omega-hydroxylates and inactivates phylloquinone (vitamin K1), and menaquinone-4 (MK-4, a form of vitamin K2), both acting as cofactors in blood coagulation (PubMed:24138531). Metabolizes with low efficiciency fatty acids, including (5Z,8Z,11Z,14Z)-eicosatetraenoic acid (arachidonate) and its oxygenated metabolite 8-hydroxyeicosatetraenoic acid (8-HETE) (PubMed:15364545, PubMed:19932081). Catalyzes N- and O-demethylation of drugs such as erythromycin, benzphetamine, ethylmorphine, chlorpromazine, imipramine and verapamil (PubMed:15364545). Catalyzes the oxidation of dialkylresorcinol 2 (PubMed:36565673). {ECO:0000269|PubMed:15364545, ECO:0000269|PubMed:18065749, ECO:0000269|PubMed:19932081, ECO:0000269|PubMed:24138531, ECO:0000269|PubMed:36565673}.
Molecular Weight:	60.1 kDa
UniProt:	Q9HBI6

Target Details

Pathways:	Monocarboxylic Acid Catabolic Process

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. 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!
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