Datasheet for ABIN3078139

CYP3A5 Protein (AA 1-502) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	CYP3A5
Protein Characteristics:	AA 1-502
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP3A5 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MDLIPNLAVE TWLLLAVSLV LLYLYGTRTH GLFKRLGIPG PTPLPLLGNV LSYRQGLWKF DTECYKKYGK MWGTYEGQLP VLAITDPDVI RTVLVKECYS VFTNRRSLGP VGFMKSAISL AEDEEWKRIR SLLSPTFTSG KLKEMFPIIA QYGDVLVRNL RREAEKGKPV TLKDIFGAYS MDVITGTSFG VNIDSLNNPQ DPFVESTKKF LKFGFLDPLF LSIILFPFLT PVFEALNVSL FPKDTINFLS KSVNRMKKSR LNDKQKHRLD FLQLMIDSQN SKETESHKAL SDLELAAQSI IFIFAGYETT SSVLSFTLYE LATHPDVQQK LQKEIDAVLP NKAPPTYDAV VQMEYLDMVV NETLRLFPVA IRLERTCKKD VEINGVFIPK GSMVVIPTYA LHHDPKYWTE PEEFRPERFS KKKDSIDPYI YTPFGTGPRN CIGMRFALMN MKLALIRVLQ NFSFKPCKET QIPLKLDTQG LLQPEKPIVL KVDSRDGTLS GE **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)

Target Details

Target:	CYP3A5
Alternative Name:	CYP3A5 (CYP3A5 Products)
Background:	Cytochrome P450 3A5 (EC 1.14.14.1) (CYPIIIA5) (Cytochrome P450-PCN3),FUNCTION: A cytochrome P450 monooxygenase involved in the metabolism of steroid hormones and vitamins (PubMed:2732228, PubMed:10681376, PubMed:11093772, PubMed:12865317). 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 (NADPH--hemoprotein reductase). Catalyzes the hydroxylation of carbon-hydrogen bonds (PubMed:12865317, PubMed:2732228, PubMed:10681376, PubMed:11093772). Exhibits high catalytic activity for the formation of catechol estrogens from 17beta-estradiol (E2) and estrone (E1), namely 2-hydroxy E1 and E2 (PubMed:12865317). Catalyzes 6beta-hydroxylation of the steroid hormones testosterone, progesterone, and androstenedione (PubMed:2732228). Catalyzes the oxidative conversion of all-trans-retinol to all-trans-retinal, a rate-limiting step for the biosynthesis of all-trans-retinoic acid (atRA) (PubMed:10681376). Further metabolizes all trans-retinoic acid (atRA) to 4-hydroxyretinoate and may play a role in hepatic atRA clearance (PubMed:11093772). Also involved in the oxidative metabolism of xenobiotics, including calcium channel blocking drug nifedipine and immunosuppressive drug cyclosporine (PubMed:2732228). {ECO:0000269|PubMed:10681376, ECO:0000269|PubMed:11093772, ECO:0000269|PubMed:12865317, ECO:0000269|PubMed:2732228}.
Molecular Weight:	57.1 kDa
UniProt:	P20815
Pathways:	Steroid Hormone Biosynthesis

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

Application Details

	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)

