

Datasheet for ABIN3126203

CYP51A1 Protein (AA 1-503) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	CYP51A1
Protein Characteristics:	AA 1-503
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP51A1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	<p>MVLLGLLQSG GWVLGQAMEQ VTGGNLLSTL LIACFTLSL VYLFRLAVGH MVQLPAGAKS PPHIYSPIPF LGHAIAFGKS PIEFLENAYE KYGPVFSFTM VGKTFTYLLG SDAAALLFNS KNEDLNAEEV YGRLTTPVFG KGVAYDVPNA IFLEQKKIHK SGLNIAHFKQ YVPIIEKEAK EYFQSWGEGS ERNVFEALSE LIILTASHCL HGKEIRSQLN EKVAQLYADL DGGFTHAAWL LPAWLPLPSF RRRDRAHREI KNIFYKAIQK RRLSKEPAED ILQTLDDSTY KDGRLPTDEE ISGMLIGLLL AGQHTSSTTS AWMGFFLAKD KPLQEKCYLE QKAVCGEDLP PLTYDQLKDL NLLDRCIKET LRLRPPIMTM MRMAKTPQTV AGYTIPPGHQ VCVSPTVNQR LKDSWAERLD FNPDRYLQDN PASGEKFAYV PFGAGRHRV GENFAYVQIK TIWSTMLRLY EFDLINGYFP TVNYTTMIHT PENPVIRYKR RSK</p> <p>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</p>

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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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 against its specific reference buffer.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

Purity:

> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Grade:

custom-made

Target Details

Target:	CYP51A1
Alternative Name:	Cyp51a1 (CYP51A1 Products)
Background:	<p>Lanosterol 14-alpha demethylase (LDM) (EC 1.14.14.154) (CYPLI) (Cytochrome P450 51A1) (CYP51) (Cytochrome P450-14DM) (Cytochrome P45014DM) (Cytochrome P450LI) (Sterol 14-alpha demethylase),FUNCTION: Sterol 14alpha-demethylase that plays a critical role in the cholesterol biosynthesis pathway, being cholesterol the major sterol component in mammalian membranes as well as a precursor for bile acid and steroid hormone synthesis (PubMed:21705796). Cytochrome P450 monooxygenase that catalyzes the three-step oxidative removal of the 14alpha-methyl group (C-32) of sterols such as lanosterol (lanosta-8,24-dien-3beta-ol) and 24,25-dihydrolanosterol (DHL) in the form of formate, and converts the sterols to 4,4-dimethyl-5alpha-cholesta-8,14,24-trien-3beta-ol and 4,4-dimethyl-8,14-cholestadien-3beta-ol, respectively, which are intermediates of cholesterol biosynthesis (PubMed:21705796). Can also demethylate substrates not intrinsic to mammals, such as eburicol (24-methylene-24,25-dihydrolanosterol), but at a lower rate than DHL (By similarity). {ECO:0000250 UniProtKB:Q64654, ECO:0000269 PubMed:21705796}.</p>
Molecular Weight:	56.8 kDa
UniProt:	Q8K0C4

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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
Restrictions:	For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.
Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months