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Datasheet for ABIN3132454
CYP21A2 Protein (AA 1-487) (Strep Tag)

Overview

Quantity:	1 mg
Target:	CYP21A2
Protein Characteristics:	AA 1-487
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP21A2 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence: MLLPGLLLLL LLLAGTRWLW GQWKLRLHL PPLAPGFLHF LQPNLPIYLL GLTQKLGPIY
RIRLGMQDVV VLNSNRTIEE ALIQKWVDFR GRPHMLNGKM DLDLSLGDYS LMWKAHKKLS
RSALMLGMRD SMEPLIEQLT QEFCERMRAQ AGTPVAIHKE FSFLTCSIIS CLTFGDKDST
LVQTLHDCVQ DLLQAWNHWS IQILTIIPLL RFLPNPGLQK LKQIQESRDH IVKQQLKQHK
DSLVAGQWKD MIDYMLQGV E KQRDGDKEER LHEGHVHMSV VDLFIGGTET TATTLWAVA
FLLHHPEIQK RLQEELDLKL GPGSQLLYRN RMQLPLLMAT IAEVLRRLRPV VPLALPHRAT
RASSISGYDI PKDMVIIPNI QGANLDEMVA ELPSKFWPDR FLEPGKNPRT PSFGCGARVC
LGEPLARLEL FVVLARLLQA FTLLPPPDTG LPSLQPQPYA GINLPIPPFQ VRLQPRNLAP QDQGERP

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.

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: $\geq 80\%$ 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: CYP21A2

Alternative Name: Cyp21 ([CYP21A2 Products](#))

Background: Steroid 21-hydroxylase (EC 1.14.14.16) (21-OHase) (Cytochrome P-450c21) (Cytochrome P450 21) (Cytochrome P450 XXI) (Cytochrome P450-C21),FUNCTION: A cytochrome P450 monooxygenase that plays a major role in adrenal steroidogenesis. Catalyzes the hydroxylation at C-21 of progesterone and 17alpha-hydroxyprogesterone to respectively form 11-deoxycorticosterone and 11-deoxycortisol, intermediate metabolites in the biosynthetic pathway of mineralocorticoids and glucocorticoids. 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). {ECO:0000250|UniProtKB:P00191, ECO:0000250|UniProtKB:P08686}.

Molecular Weight: 55.3 kDa

UniProt: [P03940](#)

Pathways: [Metabolism of Steroid Hormones and Vitamin D](#), [Steroid Hormone Biosynthesis](#), [C21-Steroid Hormone Metabolic 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.

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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)