

Datasheet for ABIN3116052

CYP2U1 Protein (AA 1-544) (Strep Tag)



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Overview

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|-------------------------------|---|
| Quantity: | 250 µg |
| Target: | CYP2U1 |
| Protein Characteristics: | AA 1-544 |
| Origin: | Human |
| Source: | Cell-free protein synthesis (CFPS) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This CYP2U1 protein is labelled with Strep Tag. |
| Application: | ELISA, Western Blotting (WB), SDS-PAGE (SDS) |

Product Details

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| Brand: | AliCE® |
| Sequence: | <p>MSSPGPSQPP AEDPPWPARL LRAPLGLLRL DPSGGALLLC GLVALLGWSW LRRRRARGIP PGPTPWPLVG NFGHVLLPPF LRRRSWLSSR TRAAGIDPSV IGPQVLLAHL ARVGSIFS FIGHYLVVVL SDFHSVREAL VQQAQEVFSDR PRVPLISIVT KEKGVVFAHY GPVWRQQRKF SHSTLRHFGL GKLSLEPKII EEFKYVKAEM QKHGEDPFCE FSIISNAVSNI ICSLCFGQR FDYTNSEFKK MLGFMSRGL ICLNSQVLLV NICPWLYYLP FGPFKELRQI EKDITSFLKK IIKDHQESLD RENPQDFIDM YLLHMEEERK NNSNSSFDEE YLFYIIGDLF IAGTDTTNS LLWCLLYMSL NPDVQEKVHE EIERVIGANR APSLTDKAQM PYTEATIMEV QRLTVVPLA IPHMTSENTV LQGYTIPKGT LILPNLWSVH RDPAIWEKPE DFYPNRFDD QGQLIKKETF IPFGIGKRVK MGEQLAKMEL FLMFVSLMQS FAFALPEDSK KPLLTGRFGL TLAPHPFNIT ISRR</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

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|-------------------|--|
| Target: | CYP2U1 |
| Alternative Name: | CYP2U1 (CYP2U1 Products) |
| Background: | <p>Cytochrome P450 2U1 (Long-chain fatty acid omega-monooxygenase) (EC 1.14.14.80),FUNCTION: A cytochrome P450 monooxygenase involved in the metabolism of arachidonic acid and its conjugates (PubMed:14660610, PubMed:24563460). 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:14660610, PubMed:24563460). Acts as an omega and omega-1 hydroxylase for arachidonic acid and possibly for other long chain fatty acids. May modulate the arachidonic acid signaling pathway and play a role in other fatty acid signaling processes (PubMed:14660610, PubMed:24563460). May down-regulate the biological activities of N-arachidonoyl-serotonin, an endocannabinoid that has anti-nociceptive effects through inhibition of fatty acid amide hydrolase FAAH, TRPV1 receptor and T-type calcium channels. Catalyzes C-2 oxidation of the indole ring of N-arachidonoyl-serotonin forming a less active product 2-oxo-N-arachidonoyl-serotonin (PubMed:24563460). {ECO:0000269 PubMed:14660610, ECO:0000269 PubMed:24563460}.</p> |
| Molecular Weight: | 62.0 kDa |
| UniProt: | Q7Z449 |

Application Details

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| 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> |

Application Details

Restrictions: For Research Use only

Handling

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| 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 |