Datasheet for ABIN3078005

CYP7B1 Protein (AA 1-506) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	CYP7B1
Protein Characteristics:	AA 1-506
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP7B1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MAGEVSAATG RFSLERLGLP GLALAAALLL LALCLLVRRT RRPGEPPLIK GWLPYLGVVL NLRKDPLRFM KTLQKQHGDT FTVLLGGKYI TFILDPFQYQ LVIKNHKQLS FRVFSNKLLE KAFSISQLQK NHDMNDELHL CYQFLQGKSL DILLESMMQN LKQVFEPQLL KTTSWDTAEL YPFCSSIIFE ITFTTIYGKV IVCDNNKFIS ELRDDFLKFD DKFAYLVSNI PIELLGNVKS IREKIIKCFS SEKLAKMQGW SEVFQSRQDV LEKYYVHEDL EIGAHHLGFL WASVANTIPT MFWAMYYLLR HPEAMAAVRD EIDRLLQSTG QKKGSGFPIH LTREQLDSLI CLESSIFEAL RLSSYSTTIR FVEEDLTLSS ETGDYCVRKG DLVAIFPPVL HGDPEIFEAP EEFRYDRFIE DGKKKTTFFK RGKKLKCYLM PFGTGTSKCP GRFFALMEIK QLLVILLTYF DLEIIDDKPI GLNYSRLLFG IQYPDSDVLF RYKVKS **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 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:	CYP7B1
Alternative Name:	CYP7B1 (CYP7B1 Products)
Background:	Cytochrome P450 7B1 (24-hydroxycholesterol 7-alpha-hydroxylase) (EC 1.14.14.26) (25/26-hydroxycholesterol 7-alpha-hydroxylase) (EC 1.14.14.29) (3-hydroxysteroid 7-alpha hydroxylase) (Oxysterol 7-alpha-hydroxylase),FUNCTION: A cytochrome P450 monooxygenase involved in the metabolism of endogenous oxysterols and steroid hormones, including neurosteroids (PubMed:10588945, PubMed:24491228). 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:10588945, PubMed:24491228). Catalyzes the hydroxylation of carbon hydrogen bonds of steroids with a preference for 7-alpha position (PubMed:10588945, PubMed:24491228). Usually metabolizes steroids carrying a hydroxy group at position 3, functioning as a 3-hydroxy steroid 7-alpha hydroxylase (PubMed:24491228). Hydroxylates oxysterols, including 25-hydroxycholesterol and (25R)-cholest-5-ene-3beta,26-diol toward 7-alpha hydroxy derivatives, which may be transported to the liver and converted to bile acids (PubMed:9802883, PubMed:10588945). Via its product 7-alpha,25-dihydroxycholesterol, a ligand for the chemotactic G protein-coupled receptor GPR183/EBI2, regulates B cell migration in germinal centers of lymphoid organs, thus guiding efficient maturation of plasma B cells and overall antigen-specific humoral immune response (By similarity). 7-alpha hydroxylates neurosteroids, including 3beta-hydroxyandrost-5-en-17-one (dehydroepiandrosterone) and pregnenolone, both involved in hippocampus-associated memory and learning (PubMed:24491228). Metabolizes androstanoids toward 6- or 7-alpha hydroxy derivatives (PubMed:24491228). {ECO:0000250|UniProtKB:Q60991, ECO:0000269|PubMed:10588945, ECO:0000269|PubMed:24491228, ECO:0000269|PubMed:9802883}.
Molecular Weight:	58.3 kDa
UniProt:	O75881
Pathways:	Intracellular Steroid Hormone Receptor Signaling Pathway, Steroid Hormone Biosynthesis, Regulation of Intracellular Steroid Hormone Receptor Signaling

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. 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