Datasheet for ABIN7546659

CYP7B1 Protein (AA 1-506) (His tag)

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Overview

Quantity:	1 mg
Target:	CYP7B1
Protein Characteristics:	AA 1-506
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP7B1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant CYP7B1 Protein expressed in mammalian cells.
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 Purification-Tag is based on experiences 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.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different

Product Details

	isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, 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)-

Target Details

	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:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months