Datasheet for ABIN7546829

CYP7A1 Protein (AA 1-504) (His tag)

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Overview

Quantity:	1 mg
Target:	CYP7A1
Protein Characteristics:	AA 1-504
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP7A1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant CYP7A1 Protein expressed in mammalian cells.
Sequence:	MMTTSLIWGI AIAACCCLWL ILGIRRRQTG EPPLENGLIP YLGCALQFGA NPLEFLRANQ RKHGHVFTCK LMGKYVHFIT NPLSYHKVLC HGKYFDWKKF HFATSAKAFG HRSIDPMDGN TTENINDTFI KTLQGHALNS LTESMMENLQ RIMRPPVSSN SKTAAWVTEG MYSFCYRVMF EAGYLTIFGR DLTRRDTQKA HILNNLDNFK QFDKVFPALV AGLPIHMFRT AHNAREKLAE SLRHENLQKR ESISELISLR MFLNDTLSTF DDLEKAKTHL VVLWASQANT IPATFWSLFQ MIRNPEAMKA ATEEVKRTLE NAGQKVSLEG NPICLSQAEL NDLPVLDSII KESLRLSSAS LNIRTAKEDF TLHLEDGSYN IRKDDIIALY PQLMHLDPEI YPDPLTFKYD RYLDENGKTK TTFYCNGLKL KYYYMPFGSG ATICPGRLFA IHEIKQFLIL MLSYFELELI EGQAKCPPLD QSRAGLGILP PLNDIEFKYK FKHL **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:	CYP7A1
Alternative Name:	CYP7A1 (CYP7A1 Products)
Background:	Cytochrome P450 7A1 (24-hydroxycholesterol 7-alpha-hydroxylase) (EC 1.14.14.26) (CYPVII) (Cholesterol 7-alpha-hydroxylase) (Cholesterol 7-alpha-monooxygenase) (EC 1.14.14.23),FUNCTION: A cytochrome P450 monooxygenase involved in the metabolism of endogenous cholesterol and its oxygenated derivatives (oxysterols) (PubMed:11013305, PubMed:12077124, PubMed:19965590, PubMed:2384150, PubMed:21813643). 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:2384150, PubMed:11013305, PubMed:12077124, PubMed:19965590, PubMed:21813643). Functions as a critical regulatory enzyme of bile acid biosynthesis and cholesterol homeostasis. Catalyzes the hydroxylation of carbon hydrogen bond at 7-alpha position of cholesterol, a rate-limiting step in cholesterol catabolism and bile acid biosynthesis (PubMed:12077124,

Target Details

	PubMed:19965590, PubMed:2384150). 7-alpha hydroxylates several oxysterols, including 4beta-hydroxycholesterol and 24-hydroxycholesterol (PubMed:11013305, PubMed:12077124). Catalyzes the oxidation of the 7,8 double bond of 7-dehydrocholesterol and lathosterol with direct and predominant formation of the 7-keto derivatives (PubMed:21813643). {ECO:0000269|PubMed:11013305, ECO:0000269|PubMed:12077124, ECO:0000269|PubMed:19965590, ECO:0000269|PubMed:21813643, ECO:0000269|PubMed:2384150}.
Molecular Weight:	57.7 kDa
UniProt:	P22680
Pathways:	Steroid Hormone Biosynthesis, Carbohydrate Homeostasis, Regulation of Lipid Metabolism by PPARalpha

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