

Datasheet for ABIN7553521
CYP1B1 Protein (AA 1-543) (His tag)



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Overview

Quantity:	1 mg
Target:	CYP1B1
Protein Characteristics:	AA 1-543
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP1B1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant CYP1B1 Protein expressed in mammalian cells.
Sequence:	<p>MGTSLSPNDP WPLNPLSIQQ TTLLLLLSVL ATVHVGQRLL RQRRRQLRSA PPGPFAWPLI GNAAAVGQAA HLSFARLARR YGDVFQIRLG SCPIVVLNGE RAIHQALVQQ GSAFADRPAP ASFRVSSGGR SMAFGHYSEH WKVQRRAAHS MMRNFFTRQP RSRQVLEGHV LSEARELVAL LVRGSADGAF LDPRLTVVA VANVMSAVCF GCRYSHDDPE FRELLSHNEE FGRTVGAGSL VDVMPWLQYF PNPVRTVFRE FEQLNRNFSN FLDKFLRHC ESLRPGAAPR DMMDAFILSA EKKAAGDSHG GGARLDLENV PATITDIFGA SQDTLSTALQ WLLLLFTRYF DVQTRVQAEI DQVVGRDRLP CMGDQPNLPY VLAFLYEAMR FSSFVPVTIP HATTANTSVL GYHIPKDTV FVNQWSVNHD PLKWPNPENF DPARFLDKDG LINKDLTSRV MIFSVGKRRRC IGEELSKMQL FLFISILAHQ CDFRANPNEP AKMNFSYGLT IKPKSFKVNV TLRESMELLD SAVQNLQAKE TCQ</p> <p>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.</p>

Product Details

Specificity: If you are looking for a specific domain and are interested in a partial protein or a different 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: CYP1B1

Alternative Name: CYP1B1 ([CYP1B1 Products](#))

Background: Cytochrome P450 1B1 (EC 1.14.14.1) (CYP1B1) (Hydroperoxy icosatetraenoate dehydratase) (EC 4.2.1.152),FUNCTION: A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins (PubMed:20972997, PubMed:11555828, PubMed:12865317, PubMed:10681376, PubMed:15258110). 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 (NADPH-hemoprotein reductase) (PubMed:20972997, PubMed:11555828, PubMed:12865317, PubMed:10681376, PubMed:15258110). Exhibits catalytic activity for the formation of hydroxyestrogens from estrone (E1) and 17beta-estradiol (E2), namely 2- and 4-hydroxy E1 and E2. Displays a predominant hydroxylase activity toward E2 at the C-4 position (PubMed:11555828, PubMed:12865317). Metabolizes testosterone and

Target Details

progesterone to B or D ring hydroxylated metabolites (PubMed:10426814). May act as a major enzyme for all-trans retinoic acid biosynthesis in extrahepatic tissues. Catalyzes two successive oxidative transformation of all-trans retinol to all-trans retinal and then to the active form all-trans retinoic acid (PubMed:10681376, PubMed:15258110). Catalyzes the epoxidation of double bonds of certain PUFA. Converts arachidonic acid toward epoxyeicosatrienoic acid (EpETrE) regioisomers, 8,9-, 11,12-, and 14,15- EpETrE, that function as lipid mediators in the vascular system (PubMed:20972997). Additionally, displays dehydratase activity toward oxygenated eicosanoids hydroperoxyeicosatetraenoates (HpETEs). This activity is independent of cytochrome P450 reductase, NADPH, and O₂ (PubMed:21068195). Also involved in the oxidative metabolism of xenobiotics, particularly converting polycyclic aromatic hydrocarbons and heterocyclic aryl amines procarcinogens to DNA-damaging products (PubMed:10426814). Plays an important role in retinal vascular development. Under hyperoxic O₂ conditions, promotes retinal angiogenesis and capillary morphogenesis, likely by metabolizing the oxygenated products generated during the oxidative stress. Also, contributes to oxidative homeostasis and ultrastructural organization and function of trabecular meshwork tissue through modulation of POSTN expression (By similarity). {ECO:0000250|UniProtKB:Q64429, ECO:0000269|PubMed:10426814, ECO:0000269|PubMed:10681376, ECO:0000269|PubMed:11555828, ECO:0000269|PubMed:12865317, ECO:0000269|PubMed:15258110, ECO:0000269|PubMed:20972997, ECO:0000269|PubMed:21068195}.

Molecular Weight: 60.8 kDa

UniProt: [Q16678](#)

Pathways: [Steroid Hormone Biosynthesis](#)

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.

Handling

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months