

Recombinant Human CYP1A1 Protein (Met1-Ala250), His tagged

Cat. No. CYP1A1-1901H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human CYP1A1 (Met1-Ala250) fused with His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Met1-Ala250
Description	<p>A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins. 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). Catalyzes the hydroxylation of carbon-hydrogen bonds. Exhibits high catalytic activity for the formation of hydroxysteroids from estrone (E1) and 17beta-estradiol (E2), namely 2-hydroxy E1 and E2, as well as D-ring hydroxylated E1 and E2 at the C15-alpha and C16-alpha positions. Displays different regioselectivities for polyunsaturated fatty acids (PUFA) hydroxylation. Catalyzes the epoxidation of double bonds of certain PUFA. Converts arachidonic acid toward epoxyeicosatrienoic acid (EET) regioisomers, 8, 9-, 11, 12-, and 14, 15-EET, that function as lipid mediators in the vascular system. Displays an absolute stereoselectivity in the epoxidation of eicosapentaenoic acid (EPA) producing the 17(R), 18(S) enantiomer.</p>

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May play an important role in 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. May also participate in eicosanoids metabolism by converting hydroperoxide species into oxo metabolites (lipoxygenase-like reaction, NADPH-independent)

Form Lyophilized powder/frozen liquid

Molecular Mass 27.99 kDa

Purity >90% as determined by SDS-PAGE

Notes For research use only.

Storage Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.

Storage Buffer Supplied as solution form in PBS, pH 7.5 or lyophilized from PBS, pH 7.5.

Reconstitution Reconstitute in sterile water for a stock solution.

Shipping They are shipped out with dry ice/blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name CYP1A1 cytochrome P450, family 1, subfamily A, polypeptide 1 [Homo sapiens (human)]

Official Symbol CYP1A1

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Synonyms

CYP1A1; cytochrome P450, family 1, subfamily A, polypeptide 1; CYP1, cytochrome P450, subfamily I (aromatic compound inducible), polypeptide 1; cytochrome P450 1A1; CP11; P1 450; P450 C; P450DX; CYP1A1; cytochrome P450-C; cytochrome P450-P1; cytochrome P450 form 6; xenobiotic monooxygenase; aryl hydrocarbon hydroxylase; flavoprotein-linked monooxygenase; cytochrome P1-450, dioxin-inducible; cytochrome P450, subfamily I (aromatic compound-inducible), polypeptide 1; AHH; AHRR; CYP1; P1-450; P450-C;

Gene ID

[1543](#)

mRNA Refseq

[NM_000499](#)

Protein Refseq

[NP_000490](#)

MIM

[108330](#)

UniProt ID

[P04798](#)

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