Recombinant Mouse Cyp1a2 Protein, Myc/DDK-tagged

Cat. No. Cyp1a2-2413M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length cytochrome P450, family 1, subfamily a, polypeptide 2 (Cyp1a2), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	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 hydroxyestrogens from estrone (E1) and 17beta-estradiol (E2), namely 2-hydroxy E1 and E2. Metabolizes cholesterol toward 25-hydroxycholesterol, a physiological regulator of cellular cholesterol homeostasis. May act as a major enzyme for all-trans retinoic acid biosynthesis in the liver. Catalyzes two successive oxidative transformation of all-trans retinol to all-trans retinal and then to the active form all-trans retinoic acid. Primarily catalyzes stereoselective epoxidation of the last double bond of polyunsaturated fatty acids (PUFA), displaying a strong preference for the (R,S) stereoisomer. Catalyzes bisallylic hydroxylation and omega-1 hydroxylation of PUFA. May also participate in eicosanoids metabolism by converting hydroperoxide species into oxo metabolites (lipoxygenase-like reaction, NADPH-

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	independent). Plays a role in the oxidative metabolism of xenobiotics. Catalyzes the N-hydroxylation of heterocyclic amines and the O-deethylation of phenacetin. Metabolizes caffeine via N3-demethylation.
Molecular Mass	58.2 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 μg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Cyp1a2 cytochrome P450, family 1, subfamily a, polypeptide 2 [Mus musculus (house mouse)]
Official Symbol	Cyp1a2
Synonyms	CYP1A2; cytochrome P450, family 1, subfamily a, polypeptide 2; cytochrome P450 1A2; CYPIA2; cytochrome P450-P2; cytochrome P450-P3; aromatic compound inducible; cytochrome P450, 1a2, aromatic compound inducible; cytochrome P450 family 1 subfamily a polypeptide 1; CP12; Cyp1a1; P450-3
Gene ID	13077

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mRNA Refseq	NM_009993
Protein Refseq	NP_034123
UniProt ID	P00186

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