

Recombinant Mouse Cyp2w1 Protein, Myc/DDK-tagged

Cat. No. Cyp2w1-2420M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length cytochrome P450, family 2, subfamily w, polypeptide 1 (Cyp2w1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	A cytochrome P450 monooxygenase that may play a role in retinoid and phospholipid metabolism. Catalyzes the hydroxylation of saturated carbon hydrogen bonds. Hydroxylates all trans-retinoic acid (atRA) to 4-hydroxyretinoate and may regulate atRA clearance. Other retinoids such as all-trans retinol and all-trans retinal are potential endogenous substrates. Catalyzes both epoxidation of double bonds and hydroxylation of carbon hydrogen bonds of the fatty acyl chain of 1-acylphospholipids/2-lysophospholipids. Can metabolize various lysophospholipids classes including lysophosphatidylcholines (LPCs), lysophosphatidylinositols (LPIs), lysophosphatidylserines (LPSs), lysophosphatidylglycerols (LPGs), lysophosphatidylethanolamines (LPEs) and lysophosphatidic acids (LPAs). Has low or no activity toward 2-acylphospholipids/1-lysophospholipids, diacylphospholipids and free fatty acids. May play a role in tumorigenesis by activating procarcinogens such as aflatoxin B1, polycyclic aromatic hydrocarbon dihydrodiols and aromatic amines. 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).

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Molecular Mass	54.9 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	Cyp2w1 cytochrome P450, family 2, subfamily w, polypeptide 1 [Mus musculus (house mouse)]
Official Symbol	Cyp2w1
Synonyms	CYP2W1; cytochrome P450, family 2, subfamily w, polypeptide 1; Gm455
Gene ID	545817
mRNA Refseq	NM_001160265
Protein Refseq	NP_001153737
UniProt ID	E9Q816

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