Recombinant Human Flavin Containing Monooxygenase 5

Cat. No. FMO5-717H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	
Species	Human
Source	Insect Cells
Description	Dimethylaniline monooxygenase [N-oxide-forming] 5 is an enzyme that in humans is encoded by the FMO5 gene. Metabolic N-oxidation of the diet-derived amino-trimethylamine (TMA) is mediated by flavin-containing monooxygenase and is subject to an inherited FMO3 polymorphism in man resulting in a small subpopulation with reduced TMA N-oxidation capacity resulting in fish odor syndrome Trimethylaminuria. Three forms of the enzyme, FMO1 found in fetal liver, FMO2 found in adult liver, and FMO3 are encoded by genes clustered in the 1q23-q25 region. Flavin-containing monooxygenases are NADPH-dependent flavoenzymes that catalyzes the oxidation of soft nucleophilic heteroatom centers in drugs, pesticides, and xenobiotics.
Biochem/physiol Actions	FMO′s are responsible for catalyzing the oxygenation of a variety of xenobiotic and drug compounds including environmental pollutants and carcinogens, which demonstrate a nucleophilic nitrogen, sulfur, selenium, and phosphorous-containing moiety associated with their respective oxides. These enzymes are classified as Phase I or oxidative drug metabolism enzymes. FMO5 is the only FMO isoform expressed in both adult and fetal human liver.
Application	FMO5 is the only FMO isoform expressed in both adult and fetal human liver.

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Physical Form	Solution in 100 mM potassium phosphate buffer, pH 7.4.
Form	buffered aqueous solution (2.5 mg in 100 mM Potassium Phosphate Buffer).
Storage Temp	-70°C.

GENE INFORMATION

Gene Name	FMO5 flavin containing monooxygenase 5 [Homo sapiens]
Synonyms	flavin containing monooxygenase 5; FMO5; dimethylaniline monooxygenase [N-oxide-forming] 5; FMO 5; dimethylaniline oxidase 5; hepatic flavin-containing monooxygenase 5; Hepatic flavin-containing monooxygenase 5; Dimethylaniline oxidase 5; EC 1.14.13.8
Gene ID	2330
mRNA Refseq	NM_001144829
Protein Refseq	NP_001138301
MIM	603957
UniProt ID	P49326
Chromosome Location	1q21.1
Pathway	Drug metabolism - cytochrome P450
Function	FAD binding; NADP or NADPH binding; flavin-containing monooxygenase activity;

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	monooxygenase activity

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