

Recombinant Human Flavin Containing Monooxygenase 1

Cat. No. FMO1-719H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Human

Source Insect Cells

Description

Dimethylaniline monooxygenase [N-oxide-forming] 1 is an enzyme that in humans is encoded by the FMO1 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 xenobiotics such as pesticides and drugs.

Biochem/physiol Actions

The FMO's are responsible for catalyzing the oxygenation of a variety of xenobiotic and drug compounds including environmental pollutants and carcinogens which contain a nucleophilic nitrogen, sulfur, selenium, or phosphorus-containing moiety associated with their respective oxides. These enzymes are classified as Phase I or oxidative drug metabolism enzymes.

Physical Form Solution in 100 mM potassium phosphate buffer, pH 7.4.

Form buffered aqueous solution.

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Storage Temp -70°C.

GENE INFORMATION

Gene Name FMO1 flavin containing monooxygenase 1 [Homo sapiens]

Synonyms flavin containing monooxygenase 1; FMO1; dimethylaniline monooxygenase [N-oxide-forming] 1; FMO 1; OTTHUMP00000033537; dimethylaniline oxidase 1; Flavin-containing monooxygenase 1 (fetal liver); fetal hepatic flavin-containing monooxygenase 1; Dimethylaniline oxidase 1; Fetal hepatic flavin-containing monooxygenase 1; EC 1.14.13.8

Gene ID 2326

mRNA Refseq NM_002021

Protein Refseq NP_002012

MIM 136130

UniProt ID Q01740

Chromosome Location 1q23-q25

Pathway Drug metabolism - cytochrome P450; Biological oxidations

Function FAD binding; NADP or NADPH binding; binding; flavin-containing monooxygenase activity; monooxygenase activity

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