

Recombinant Human FMO3, His-tagged

Cat. No. FMO3-12944H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human FMO3 protein, fused to His-tag, was expressed in E.coli and purified by Ni-sepharose.
Species	Human
Source	E.coli
ProteinLength	27-351a.a.
Description	Flavin-containing monooxygenases (FMO) are an important class of drug-metabolizing enzymes that catalyze the NADPH-dependent oxygenation of various nitrogen-,sulfur-, and phosphorous-containing xenobiotics such as therapeutic drugs, dietary compounds, pesticides, and other foreign compounds. The human FMO gene family is composed of 5 genes and multiple pseudogenes. FMO members have distinct developmental- and tissue-specific expression patterns. The expression of this FMO3 gene, the major FMO expressed in adult liver, can vary up to 20-fold between individuals. This inter-individual variation in FMO3 expression levels is likely to have significant effects on the rate at which xenobiotics are metabolised and, therefore, is of considerable interest to the pharmaceutical industry. This transmembrane protein localizes to the endoplasmic reticulum of many tissues. Alternative splicing of this gene results in multiple transcript variants encoding the same protein. Mutations in this gene cause the disorder trimethylaminuria (TMAu) which is characterized by the accumulation and excretion of unmetabolized trimethylamine and a distinctive body odor. In healthy individuals, trimethylamine is

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primarily converted to the non odorous trimethylamine N-oxide.

Storage

The protein is stored in PBS buffer at -20°C. Avoid repeated freezing and thawing cycles.

Storage Buffer

1M PBS (58mM Na₂HPO₄, 17mM NaH₂PO₄, 68mM NaCl, pH8.) added with 300mM Imidazole and 0.7% Sarcosyl, 15% glycerol.

GENE INFORMATION

Gene Name

FMO3 flavin containing monooxygenase 3 [Homo sapiens]

Official Symbol

FMO3

Synonyms

FMO3; flavin containing monooxygenase 3; dimethylaniline monooxygenase [N-oxide-forming] 3; FMO 3; FMO II; FMO form 2; dimethylaniline oxidase 3; hepatic flavin-containing monooxygenase 3; hepatic flavin-containing monooxygenase-3; TMAU; FMOII; dJ127D3.1; MGC34400;

Gene ID

2328

mRNA Refseq

NM_001002294

Protein Refseq

NP_001002294

MIM

136132

UniProt ID

P31513

**Chromosome
Location**

1q24.3

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Pathway

Biological oxidations, organism-specific biosystem; Drug metabolism - cytochrome P450, organism-specific biosystem; Drug metabolism - cytochrome P450, conserved biosystem; FMO oxidizes nucleophiles, organism-specific biosystem; Metabolism, organism-specific biosystem; Nicotine metabolism, organism-specific biosystem; Phase 1 - Functionalization of compounds, organism-specific biosystem;

Function

N,N-dimethylaniline monooxygenase activity; NADP binding; amino acid binding; flavin adenine dinucleotide binding; monooxygenase activity;

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