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Anti-FMO3 Antibody

Catalog # ABO11073

Product Information

Application	WB
Primary Accession	P31513
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Dimethylaniline monooxygenase[N-oxide-forming] 3(FMO3) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	2328
Other Names	Dimethylaniline monooxygenase [N-oxide-forming] 3, 1.14.13.8, Dimethylaniline oxidase 3, FMO II, FMO form 2, Hepatic flavin-containing monooxygenase 3, FMO 3, Trimethylamine monooxygenase, 1.14.13.148, FMO3
Calculated MW	60033
Application Details	Western blot, 0.1-0.5 □g/ml, Rat, Human, Mouse
Subcellular Localization	Microsome membrane. Endoplasmic reticulum membrane.
Tissue Specificity	Liver.
Source	Eukaryota
Protein Name	Dimethylaniline monooxygenase [N-oxide-forming] 3
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human FMO3(76-90aa DDFPNFMHNSKIQEY), different from the related rat sequence by one amino acid, and from the related mouse sequence by two amino acids.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the FMO family.

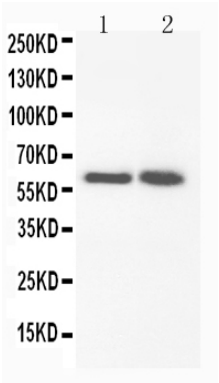
Protein Information

Name	FMO3
Function	Essential hepatic enzyme that catalyzes the oxygenation of a wide variety of nitrogen- and sulfur-containing compounds including drugs as well as dietary compounds (PubMed:10759686, PubMed:30381441, PubMed:32156684). Plays an important role in the metabolism of trimethylamine (TMA), via the production of trimethylamine N-oxide (TMAO) metabolite (PubMed:9776311). TMA is generated by the action of gut microbiota using dietary precursors such as choline, choline containing compounds, betaine or L-carnitine. By regulating TMAO concentration, FMO3 directly impacts both platelet responsiveness and rate of thrombus formation (PubMed:29981269).
Cellular Location	Microsome membrane {ECO:0000250|UniProtKB:P32417}; Single-pass membrane protein. Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P32417}; Single-pass membrane protein
Tissue Location	Liver.

Background

FMO3(Flavin-containing Monooxygenase 3) is an enzyme that in humans is encoded by the FMO3 gene. The mammalian flavin-containing monooxygenases(FMO) represent a multigene family whose gene products are localized in the endoplasmic reticulum of many tissues. The FMO3 gene contains 1 noncoding and 8 coding exons. The FMO3 gene is mapped on 1q24.3. Using quantitative RNase protection assays, FMO3 is present in low abundance in fetal liver and lung and in adult kidney and lung, and in much greater abundance in adult liver. By Western blot analysis of human liver microsomal samples ranging from 8 weeks gestation to 18 years of age, FMO1 is the major fetal isoform and FMO3 is the major adult isoform. FMO3 was expressed at intermediate levels until 11 years of age when a gender-independent increase in FMO3 expression was observed during puberty. Sufferers of trimethylaminuria may display a reduced ability to metabolize substrates for FMO3 such as nicotine. FMO3 metabolizes a number of drugs, including amphetamine, clozapine, deprenyl, metamphetamine, tamoxifen, ethionamide, thiacetazone, and sulindac sulfide.

Images



Anti-FMO3 antibody, ABO11073, Western blottingLane 1: Rat Liver Tissue Lysate Lane 2: Rat Liver Tissue Lysate

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.