

FMO5 Blocking Peptide (C-term)

Synthetic peptide

Catalog # BP20282B

Specification

FMO5 Blocking Peptide (C-term) - Product Information

Primary Accession

[P49326](#)

Other Accession

[NP_001452.2](#)**FMO5 Blocking Peptide (C-term) - Additional Information**

Gene ID 2330

Other Names

Dimethylaniline monooxygenase [N-oxide-forming] 5, Dimethylaniline oxidase 5, Hepatic flavin-containing monooxygenase 5, FMO 5, FMO5

Target/Specificity

The synthetic peptide sequence is selected from aa 489-502 of HUMAN FMO5

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

FMO5 Blocking Peptide (C-term) - Protein InformationName FMO5 ([HGNC:3773](#))**Function**

Acts as a Baeyer-Villiger monooxygenase on a broad range of substrates. Catalyzes the insertion of an oxygen atom into a carbon- carbon bond adjacent to a carbonyl, which converts ketones to esters (PubMed:28783300, PubMed:26771671, PubMed:20947616). Active on diverse carbonyl compounds, whereas soft nucleophiles are mostly non- or poorly reactive (PubMed:26771671, PubMed:7872795). In contrast with other forms of FMO it is non- or poorly active on 'classical' substrates such as drugs, pesticides, and dietary components containing soft nucleophilic heteroatoms (Probable) (PubMed:7872795). Able to oxidize drug molecules bearing a carbonyl group on an aliphatic chain, such as nabumetone and

pentoxifylline (PubMed:28783300). Also, in the absence of substrates, shows slow but yet significant NADPH oxidase activity (PubMed:26771671). Acts as a positive modulator of cholesterol biosynthesis as well as glucose homeostasis, promoting metabolic aging via pleiotropic effects (By similarity).

Cellular Location

Microsome membrane. Endoplasmic reticulum membrane

Tissue Location

Expressed in fetal and adult liver.

FMO5 Blocking Peptide (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

FMO5 Blocking Peptide (C-term) - Images**FMO5 Blocking Peptide (C-term) - Background**

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. Alternative splicing results in multiple transcript variants.

FMO5 Blocking Peptide (C-term) - References

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Ross, C.J., et al. Nat. Genet. 41(12):1345-1349(2009)
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