

FMO3 (T-17): sc-51288

BACKGROUND

The flavin containing monooxygenase family consists of five gene products, FMO1-5, that are major enzymatic oxidants involved in the metabolism of various therapeutics. Located in the liver, FMO3 is a hepatic microsomal enzyme that oxygenates soft nucleophiles such as secondary and tertiary amines. Through its N-oxygenase capabilities, FMO3 acts on a variety of xenobiotics to catalyze oxidative digestion. Defects in the FMO3 gene are the primary cause of trimethylaminuria (TMAuria), an inborn error of metabolism associated with a fishy body odor emitting from sweat, urine and breath. Genetic mutations in FMO3 lead to the N-oxidation of amino-trimethylamine derived from food products, thus producing the malodor associated with TMAuria.

REFERENCES

1. Burnett, V.L., et al. 1994. Cloning and sequencing of flavin-containing monooxygenases FMO3 and FMO4 from rabbit and characterization of FMO3. *J. Biol. Chem.* 269: 14314-14322.
2. Krause, R.J., et al. 1996. Characterization of the methionine S-oxidase activity of rat liver and kidney microsomes: immunochemical and kinetic evidence for FMO3 being the major catalyst. *Arch. Biochem. Biophys.* 333: 109-116.
3. Falls, J.G., et al. 1997. Molecular cloning, sequencing, and expression in *Escherichia coli* of mouse flavin-containing monooxygenase 3 (FMO3): comparison with the human isoform. *Arch. Biochem. Biophys.* 347: 9-18.
4. Petalcorin, M.I., et al. 2005. The *fmo* genes of *Caenorhabditis elegans* and *C. briggsae*: characterisation, gene expression and comparative genomic analysis. *Gene* 346: 83-96.
5. Koukouritaki, S.B., et al. 2005. Discovery of novel flavin-containing monooxygenase 3 (FMO3) single nucleotide polymorphisms and functional analysis of upstream haplotype variants. *Mol. Pharmacol.* 68: 383-392.

CHROMOSOMAL LOCATION

Genetic locus: FMO3 (human) mapping to 1q24.3; Fmo3 (mouse) mapping to 1 H2.1.

SOURCE

FMO3 (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FMO3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-51288 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

FMO3 (T-17) is recommended for detection of FMO3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

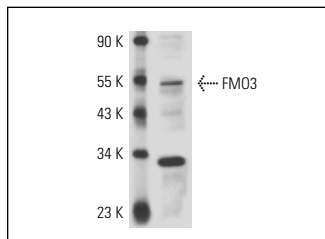
FMO3 (T-17) is also recommended for detection of FMO3 in additional species, including equine and porcine.

Suitable for use as control antibody for FMO3 siRNA (h): sc-72256, FMO3 siRNA (m): sc-72257, FMO3 shRNA Plasmid (h): sc-72256-SH, FMO3 shRNA Plasmid (m): sc-72257-SH, FMO3 shRNA (h) Lentiviral Particles: sc-72256-V and FMO3 shRNA (m) Lentiviral Particles: sc-72257-V.

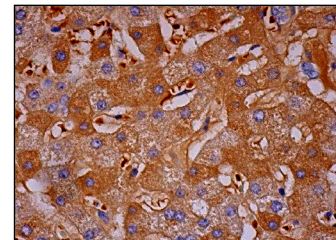
Molecular Weight of FMO3: 58 kDa.

Positive Controls: rat liver extract: sc-2395.

DATA



FMO3 (T-17): sc-51288. Western blot analysis of FMO3 expression in rat liver tissue extract.



FMO3 (T-17): sc-51288. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic and membrane staining of hepatocytes and cytoplasmic staining of sinusoidal endothelial cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



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Try **FMO3 (C-1): sc-515042** or **FMO3 (D-9): sc-514882**, our highly recommended monoclonal alternatives to FMO3 (T-17).