

FMO5 (C-14): sc-103494

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. Localizing to microsomal and endoplasmic reticulum membranes, FMO5 (flavin containing monooxygenase 5), also known as dimethylaniline monooxygenase [N-oxide-forming] 5, hepatic flavin-containing monooxygenase 5 or dimethylaniline oxidase 5, is a 533 amino acid protein belonging to the FMO family. Expressed in adult and fetal liver, FMO5 is unlike other FMO family members because it does not function as a drug-metabolizing enzyme. FMO5 binds FAD as a cofactor and is encoded by a gene located on human chromosome 1q21.1.

REFERENCES

- Overby, L.H., Buckpitt, A.R., Lawton, M.P., Atta-Asafo-Adjei, E., Schulze, J. and Philpot, R.M. 1995. Characterization of flavin-containing monooxygenase 5 (FMO5) cloned from human and guinea pig: evidence that the unique catalytic properties of FMO5 are not confined to the rabbit ortholog. *Arch. Biochem. Biophys.* 317: 275-284.
- Phillips, I.R., Dolphin, C.T., Clair, P., Hadley, M.R., Hutt, A.J., McCombie, R.R., Smith, R.L. and Shephard, E.A. 1995. The molecular biology of the flavin-containing monooxygenases of man. *Chem. Biol. Interact.* 96: 17-32.
- McCombie, R.R., Dolphin, C.T., Povey, S., Phillips, I.R. and Shephard, E.A. 1996. Localization of human flavin-containing monooxygenase genes FMO2 and FMO5 to chromosome 1q. *Genomics* 34: 426-429.
- Overby, L.H., Carver, G.C. and Philpot, R.M. 1997. Quantitation and kinetic properties of hepatic microsomal and recombinant flavin-containing monooxygenases 3 and 5 from humans. *Chem. Biol. Interact.* 106: 29-45.
- Gelb, B.D., Zhang, J., Cotter, P.D., Gershin and I.F., Desnick, R.J. 1997. Physical mapping of the human connexin 40 (GJA5), flavin-containing monooxygenase 5, and natriuretic peptide receptor genes on 1q21. *Genomics* 39: 409-411.
- Miller, M.M., James, R.A., Richer, J.K., Gordon, D.F., Wood, W.M. and Horwitz, K.B. 1997. Progesterone regulated expression of flavin-containing monooxygenase 5 by the B-isoform of progesterone receptors: implications for tamoxifen carcinogenicity. *J. Clin. Endocrinol. Metab.* 82: 2956-2961.
- Krueger, S.K. and Williams, D.E. 2005. Mammalian flavin-containing monooxygenases: structure/function, genetic polymorphisms and role in drug metabolism. *Pharmacol. Ther.* 106: 357-387.

CHROMOSOMAL LOCATION

Genetic locus: FMO5 (human) mapping to 1q21.1.

SOURCE

FMO5 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FMO5 of human origin.

STORAGE

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

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-103494 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FMO5 (C-14) is recommended for detection of FMO5 of human and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other FMO family members.

Suitable for use as control antibody for FMO5 siRNA (h): sc-88012, FMO5 shRNA Plasmid (h): sc-88012-SH and FMO5 shRNA (h) Lentiviral Particles: sc-88012-V.

Molecular Weight of FMO5: 60 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **FMO5 (E-8): sc-393732**, our highly recommended monoclonal alternative to FMO5 (C-14).