

FMO2 (C-12): sc-83826

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. FMO2 (flavin containing monooxygenase 2 (non-functional)), also known as FMO1B1, dimethylaniline monooxygenase [N-oxide-forming] 2 or pulmonary flavin-containing monooxygenase 2, is a 535 amino acid protein that is expressed in lung and localizes to microsomal and endoplasmic reticulum membranes. A member of the FMO family, FMO2 catalyzes S-oxidation of methimazole and N-oxidation of various primary alkylamines into their oximes. The gene encoding FMO2 maps to human chromosome 1, forming a cluster with the genes for FMO1, FMO3 and FMO4.

REFERENCES

1. Phillips, I.R., et al. 1995. The molecular biology of the flavin-containing monooxygenases of man. *Chem. Biol. Interact.* 96: 17-32.
2. McCombie, R.R., et al. 1996. Localization of human flavin-containing monooxygenase genes FMO2 and FMO5 to chromosome 1q. *Genomics* 34: 426-429.
3. Dolphin, C.T., et al. 1998. The flavin-containing monooxygenase 2 gene (FMO2) of humans, but not of other primates, encodes a truncated, non-functional protein. *J. Biol. Chem.* 273: 30599-30607.
4. Krueger, S.K., et al. 2002. Identification of active flavin-containing monooxygenase isoform 2 in human lung and characterization of expressed protein. *Drug Metab. Dispos.* 30: 34-41.
5. Krueger, S.K., et al. 2004. Differences in FMO2*1 allelic frequency between Hispanics of Puerto Rican and Mexican descent. *Drug Metab. Dispos.* 32: 1337-1340.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 603955. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: FMO2 (human) mapping to 1q24.3.

SOURCE

FMO2 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FMO2 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-83826 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

FMO2 (C-12) is recommended for detection of FMO2 of human 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.

FMO2 (C-12) is also recommended for detection of FMO2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for FMO2 siRNA (h): sc-75043, FMO2 shRNA Plasmid (h): sc-75043-SH and FMO2 shRNA (h) Lentiviral Particles: sc-75043-V.

Molecular Weight of FMO2: 61 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.