SANTA CRUZ BIOTECHNOLOGY, INC.

FMO1 (L-12): sc-83822

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. FMO1, also known as dimethylaniline oxidase 1 or dimethylaniline monooxygenase (N-oxide-forming) 1, is a 532 amino acid protein localized to the microsome and endoplasmic reticulum membranes. In human fetuses, the FMO1 gene is expressed in the liver, but shortly after birth, expression is switched off. However, the gene continues to be expressed in adult kidney and, to a lesser extent, in intestine. In all other mammals, the FMO1 gene continues to be expressed in liver after birth. Functionally, FMO1 is involved in the oxidative metabolism of a variety of xenobiotics, such as drugs and pesticides, primarily by catalyzing the N-oxygenation of secondary and tertiary amines. The gene encoding FMO1 is located on chromosome 1q24.3.

REFERENCES

1. Luo, Z. and Hines, R.N. 1996. Identification of multiple rabbit flavin-containing monooxygenase form 1 (FMO1) gene promoters and observation of tissue-specific DNase I hypersensitive sites. Arch. Biochem. Biophys. 336: 251-260.
2. Cereda, C., et al. 2006. Increased incidence of FMO1 gene single nucleotide polymorphisms in sporadic amyotrophic lateral sclerosis. Amyotroph. Lateral Scler. 7: 227-234.
3. Shephard, E.A., et al. 2007. Alternative promoters and repetitive DNA elements define the species-dependent tissue-specific expression of the FMO1 genes of human and mouse. Biochem. J. 406: 491-499.
4. Shaffer, C.L., et al. 2007. Metabolism and disposition of a selective α(7) nicotinic acetylcholine receptor agonist in humans. Drug Metab. Dispos. 35: 1188-1195.
5. Glenn, K.L., et al. 2007. Analysis of FMO genes and off flavour in pork. J. Anim. Breed. Genet. 124: 35-38.
6. Hernandez, D., et al. 2009. Deletion of the mouse FMO1 gene results in enhanced pharmacological behavioural responses to imipramine. Pharmacogenet. Genomics 19: 289-299.

CHROMOSOMAL LOCATION

Genetic locus: FMO1 (human) mapping to 1q24.3; Fmo1 (mouse) mapping to 1 H2.1.

SOURCE

FMO1 (L-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FMO1 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-83822 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FMO1 (L-12) is recommended for detection of FMO1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other FMO family members.

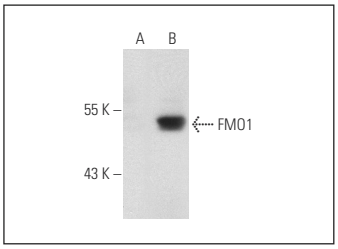
FMO1 (L-12) is also recommended for detection of FMO1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FMO1 siRNA (h): sc-75041, FMO1 siRNA (m): sc-75042, FMO1 shRNA Plasmid (h): sc-75041-SH, FMO1 shRNA Plasmid (m): sc-75042-SH, FMO1 shRNA (h) Lentiviral Particles: sc-75041-V and FMO1 shRNA (m) Lentiviral Particles: sc-75042-V.

Molecular Weight of FMO1: 60 kDa.

Positive Controls: FMO1 (m): 293T Lysate: sc-120299.

DATA



FMO1 (L-12): sc-83822. Western blot analysis of FMO1 expression in non-transfected: sc-117752 (**A**) and mouse FMO1 transfected: sc-120299 (**B**) 293T whole cell lysates.

STORAGE

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

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.