

mEH (K-16): sc-22339

BACKGROUND

Epoxide hydrolases (EHs) are biotransformation enzymes that catalyze the hydrolysis of arene and aliphatic epoxides to less reactive and more water soluble dihydrodiols by the trans addition of water. The enzymatic hydration is essentially irreversible and produces mainly metabolites of lower reactivity that can be conjugated and excreted, and, therefore, are generally regarded as detoxifying. Microsomal EH (mEH) is one of many enzymes involved in the metabolism of endogenous and exogenous toxicants such as tobacco-derived carcinogens. mEH exhibits a broad substrate specificity, while the soluble EH (sEH) is an enzyme with a "complementary" substrate specificity to mEH. The mEH protein is encoded by the EPHX1 gene, which maps to chromosome 1q42.1. Polymorphism of the EPHX1 gene is a risk factor for ovarian cancer and hepatocellular carcinoma.

REFERENCES

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2. Seidegard, J. and Ekstrom, G. 1997. The role of human glutathione transferases and epoxide hydrolases in the metabolism of xenobiotics. *Environ. Health Perspect.* 105 Suppl 4: 791-799.
3. Hartsfield, J.K. Jr., Hickman, T.A., Everett, E.T., Shaw, G.M., Lammer, E.J. and Finnell, R.A. 2001. Analysis of the EPHX1 113 polymorphism and GSTM1 homozygous null polymorphism and oral clefing associated with maternal smoking. *Am. J. Med. Genet.* 102: 21-24.
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5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 132810. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. SWISS-PROT/TrEMBL (P07099). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: Epxh1 (mouse) mapping to 1 H4.

SOURCE

mEH (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of mEH 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-22339 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

mEH (K-16) is recommended for detection of mEH of mouse 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).

Suitable for use as control antibody for mEH siRNA (m): sc-40540, mEH shRNA Plasmid (m): sc-40540-SH and mEH shRNA (m) Lentiviral Particles: sc-40540-V.

Molecular Weight of MIBP1: 50 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.

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.



Try **mEH (17): sc-135984**, our highly recommended monoclonal alternative to mEH (K-16).