SANTA CRUZ BIOTECHNOLOGY, INC.

CYP1A2 (T-17): sc-9832

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CYP1A2, also called Cytochrome P450 1A2, is a heme-thiolate monooxygenase enzyme involved in the NADPH-dependent electron transport pathway of liver microsomes. A member of the cytochrome P450 family, CYP1A2 oxidizes fatty acids, steroids and xenobiotics. It is also involved in the metabolism of imiprimine, propranol and clozapine. CYP1A2 localizes to the membrane of the endoplasmic reticulum. It is induced by 3-methylcholanthrene, Insulin, modafinil and hyperforin and inhibited by many fluoroquinolone antibiotics, caffeine, fluvoxamine and cimetidine. In addition, the involvement of CYP1A2 in the metabolism of estrogen is associated with a reduced risk of breast cancer.

REFERENCES

1. Botelho, L.H., et al. 1982. Amino-terminal and carboxy-terminal sequence of hepatic microsomal cytochrome P-450d, a unique hemoprotein from rats treated with isosafrole. Biochemistry 21: 1152-1155.
2. Sogawa, K., et al. 1985. Complete nucleotide sequence of a methylcholanthrene-inducible cytochrome P-450 (P-450d) gene in the rat. J. Biol. Chem. 260: 5026-5032.

CHROMOSOMAL LOCATION

Genetic locus: CYP1A2 (human) mapping to 15q24.1.

SOURCE

CYP1A2 (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CYP1A2 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-9832 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CYP1A2 (T-17) is recommended for detection of CYP1A2 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), 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).

CYP1A2 (T-17) is also recommended for detection of CYP1A2 in additional species, including canine.

Suitable for use as control antibody for CYP1A2 siRNA (h): sc-41485, CYP1A2 shRNA Plasmid (h): sc-41485-SH and CYP1A2 shRNA (h) Lentiviral Particles: sc-41485-V.

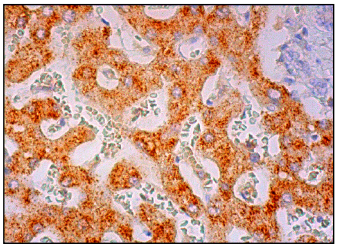
Molecular Weight of CYP1A2: 54 kDa.

Positive Controls: human liver extract: sc-363766.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



CYP1A2 (T-17): sc-9832. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

SELECT PRODUCT CITATIONS

1. Thum, T. and Borlak, J. 2008. Detection of early signals of hepatotoxicity by gene expression profiling studies with cultures of metabolically competent human hepatocytes. Arch. Toxicol. 82: 89-101.

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.