SANTA CRUZ BIOTECHNOLOGY, INC.

CYP1A1 (H-70): sc-20772

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

P450 enzymes constitute a family of monooxygenase enzymes that are involved in the metabolism of a wide array of endogenous and xenobiotic compounds. Several P450 enzymes have been classified by sequence similarities as members of the CYP1A and CYP2A subfamilies. NADPH cytochrome P450 reductase is a microsomal enzyme responsible for the transfer of electrons from NADPH to cytochrome P450 enzymes during the P450 catalytic cycle. NADPH cytochrome P450 reductase is localized to the endoplasmic reticulum where it is also able to transfer electrons to heme oxygenase and cytochrome β5. NADPH cytochrome P450 reductase is structurally related to two separate flavoprotein families, ferredoxin nucleotide reductase (FNR) and flavodoxin. Electron transfer of NADPH cytochrome P450 reductase requires the binding of two flavin cofactors, FAD and FMN, to the FNR and flavodoxin domains, respectively.

CHROMOSOMAL LOCATION

Genetic locus: CYP1A1 (human) mapping to 15q24.1; Cyp1a1 (mouse) mapping to 9 B.

SOURCE

CYP1A1 (H-70) is a rabbit polyclonal antibody raised against amino acids 246-315 mapping to an internal region of CYP1A1 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.

APPLICATIONS

CYP1A1 (H-70) is recommended for detection of CYP1A1 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), 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).

Suitable for use as control antibody for CYP1A1 siRNA (h): sc-41483, CYP1A1 siRNA (m): sc-41484, CYP1A1 shRNA Plasmid (h): sc-41483-SH, CYP1A1 shRNA Plasmid (m): sc-41484-SH, CYP1A1 shRNA (h) Lentiviral Particles: sc-41483-V and CYP1A1 shRNA (m) Lentiviral Particles: sc-41484-V.

Molecular Weight of CYP1A1: 56 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or CYP1A1 (h): 293T Lysate: sc-114027.

STORAGE

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

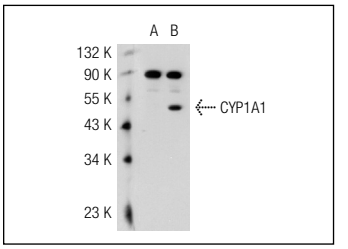
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

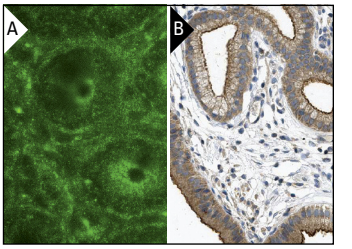
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



CYP1A1 (H-70): sc-20772. Western blot analysis of CYP1A1 expression in non-transfected: sc-117752 (**A**) and human CYP1A1 transfected: sc-114027 (**B**) 293T whole cell lysates.



CYP1A1 (H-70) sc-20772. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and membrane staining of glandular cells magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

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9. Terao, M., et al. 2011. Induction of miR-21 by retinoic acid in estrogen receptor-positive breast carcinoma cells: biological correlates and molecular targets. J. Biol. Chem. 286: 4027-4042.
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