CYP1A2 (D1tkt5): sc-53241

BACKGROUND
CYP1A2, also called Cytochrome P450 1A2, is a heme-thiolate monoxygenase 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.

CHROMOSOMAL LOCATION
Genetic locus: CYP1A2/CYP1A1 (human) mapping to 15q24.1; Cyp1a2/Cyp1a1 (mouse) mapping to 9 B.

SOURCE
CYP1A2 (D1tkt5) is a mouse monoclonal antibody raised against liver cytochrome P450 1A2 of rat origin.

PRODUCT
Each vial contains 200 µg IgG, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CYP1A2 (D15) is available conjugated to agarose (sc-53241 AC), 500 µg/0.25 ml agarose in 1 ml, for WB, HRP; to HRP (sc-53241 HRP), 200 µg/ml, for WB, HRP, ELISA; to either phycocyanin (sc-53241 PE), fluorescein (sc-53241 FITC), Alexa Fluor® 488 (sc-53241 AF488), Alexa Fluor® 594 (sc-53241 AF594) or Alexa Fluor® 647 (sc-53241 AF647), 200 µg/ml, for IF, HRP and FCM; and to either Alexa Fluor® 680 (sc-53241 AF680) or Alexa Fluor® 790 (sc-53241 AF790), 200 µg/ml, for Near-Infrared (NIR) whole cell lysates. Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

APPLICATIONS
CYP1A2 (D15) is recommended for detection of CYP1A2 and, to a lesser extent, 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); not recommended for detection of rat CYP 2A1, 2B1, 2B2, 2B6, 2B7, 2C11, 4A1, 4A2 and 4A3.

Molecular Weight of CYP1A2: 54 kDa.

Positive Controls: CYP1A2 (m): 293T Lysate: sc-119564, human liver extract: sc-363766 or mouse liver extract: sc-2256.

RECOMMENDED SUPPORT REAGENTS
To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG BP-HRP (Cruz Marker); sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA

SELECT PRODUCT CITATIONS

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