**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 imipramine, propranolol 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**


**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 IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**STORAGE**

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

**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, 2C6, 2C7, 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-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ 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).
4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistoament: sc-45086, or Organo/Limonene Mount: sc-45087.

**DATA**

CYP1A2 (D15): sc-53241. Western blot analysis of CYP1A2 expression in non-transfected: sc-117752 (A) and mouse CYP1A2 transfected: sc-119564 (B) 293T whole cell lysates.

CYP1A2 (D15): sc-53241. Immunoperoxidase staining of formalin fixed, paraffin embedded human urinary bladder tissue showing cytoplasmic staining of outer layer of urothelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (B).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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