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 βS. 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/CYP1A2 (human) mapping to 15q24.1; Cyp1a1/Cyp1a2 (mouse) mapping to 9 B.

**SOURCE**

CYP1A1 (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CYP1A1 of mouse 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-9828 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

CYP1A1 (G-18) is recommended for detection of CYP1A1 and, to a lesser extent, CYP1A2 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)), 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).

Molecular Weight of CYP1A1: 56 kDa.

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

**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.

**BACKGROUND**

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

**RESEARCH USE**

**DATA**

CYP1A1 (G-18): sc-9828. Western blot analysis of CYP1A1 expression in non-transfected: sc-117752 (A) and human CYP1A1 transfected: sc-114027 (B) 293T whole cell lysates.

CYP1A1 (G-18): sc-9828. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (B).

**SELECT PRODUCT CITATIONS**


