BACKGROUND
The cytochrome P450 proteins are monoxygenases that catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. P450 enzymes are classified into subfamilies based on their sequence similarities. CYP27B1, a 508 amino acid protein that belongs to the XXVIIIB subfamily of the cytochrome P450 family, localizes to the mitochondrion and is expressed in the kidney. The CYP27B1 protein catalyzes the conversion of 25-hydroxyvitamin D$_3$ (25(OH)D$_3$) to 1-α,25-dihydroxyvitamin D$_3$ (1,25(OH)$_2$D$_3$) and functions in calcium metabolism, normal bone growth and tissue differentiation. Mutations in the gene which encodes for CYP27B1 cause vitamin D-dependent rickets type 1 (VDDR-1), also designated pseudo-vitamin D deficiency rickets (PDDR), an autosomal recessive disease characterized by early onset of rickets with hypocalcemia and muscle weakness.

CHROMOSOMAL LOCATION
Genetic locus: CYP27B1 (human) mapping to 12q14.1; Cyp27b1 (mouse) mapping to 10 D3.

SOURCE
CYP27B1 (H-90) is a rabbit polyclonal antibody raised against amino acids 221-310 mapping within an internal region of CYP27B1 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
CYP27B1 (H-90) is recommended for detection of CYP27B1 of human, mouse and, to a lesser extent, rat 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CYP27B1 (H-90) is also recommended for detection of CYP27B1 in additional species, including porcine.


Molecular Weight of CYP27B1: 56 kDa.

Positive Controls: CYP27B1 (m): 293T Lysate: sc-119570 or mouse kidney extract: sc-2255.

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.

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

DATA
CYP27B1 (H-90): sc-67261. Western blot analysis of CYP27B1 expression in non-transfected: sc-117752 (A) and mouse CYP27B1 transfected: sc-119570 (B) 293T whole cell lysates and mouse kidney tissue extract (C).

SELECT PRODUCT CITATIONS