

CYP2R1 (T-18): sc-48988

BACKGROUND

P450 enzymes constitute a family of monooxygenase enzymes that are involved in the metabolism of a wide array of endogenous and xenobiotic compounds. There are currently 57 known active cytochrome P450 (CYP) genes and 58 known pseudogenes present in the human genome. CYP2R1 is a 501 amino acid protein which belongs to the CYP2 family of cytochrome P450 proteins. These proteins are usually involved in the metabolism of foreign compounds. CYP2R1 acts as a major vitamin D 25-hydroxylase. A homozygous mutation in the CYP2R1 gene eliminates the vitamin D3 25-hydroxylase activity of the CYP2R1 protein, causing 25-hydroxyvitamin D3 deficiency. Manifestations of 25-hydroxyvitamin D3 deficiency include abnormally low plasma levels of 25-hydroxyvitamin D3 and various symptoms of vitamin D deficiency, including skeletal abnormalities, hypophosphatemia and hypocalcemia.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CYP2R1 (human) mapping to 11p15.2; Cyp2r1 (mouse) mapping to 7 F1.

SOURCE

CYP2R1 (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CYP2R1 of human origin.

STORAGE

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

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-48988 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CYP2R1 (T-18) is recommended for detection of CYP2R1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CYP2R1 (T-18) is also recommended for detection of CYP2R1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for CYP2R1 siRNA (h): sc-60481, CYP2R1 siRNA (m): sc-60482, CYP2R1 shRNA Plasmid (h): sc-60481-SH, CYP2R1 shRNA Plasmid (m): sc-60482-SH, CYP2R1 shRNA (h) Lentiviral Particles: sc-60481-V and CYP2R1 shRNA (m) Lentiviral Particles: sc-60482-V.

Molecular Weight of CYP2R1: 57 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

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.