SANTA CRUZ BIOTECHNOLOGY, INC.

CYP26C1 (P-12): sc-164134

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The Power to Question

BACKGROUND

Cytochrome P450 proteins are heme-thiolate monooxygenases that mediate NADPH-dependent electron transport and function to oxidize a variety of structurally unrelated compounds, including steroids, fatty acids and xenobiotics. Specifically, cytochrome P450s are responsible for metabolizing arachidonic acid to hydroxyeicosatetraenoic acid (a regulator of blood pressure) and epoxyeicosatrienoic acid (a molecule involved in signaling events). CYP26C1 (cytochrome P450, family 26, subfamily C, polypeptide 1) is a 522 amino acid single-pass membrane protein expressed in most tissues at very low levels. Belonging to the cytochrome P450 family, CYP26C1 uses heme groups as cofactors and is induced by retinoic acid. CYP26C1 participates in the retinoic metabolism and acts on retinoids, including all-*trans*-retinoic acid (RA) and its stereoisomer, 9-*cis*-RA.

REFERENCES

1. Ozpolat, B., et al. 2002. all-*trans*-retinoic acid-induced expression and regulation of retinoic acid 4-hydroxylase (CYP26) in human promyelocytic leukemia. Am. J. Hematol. 70: 39-47.
2. Ozpolat, B. and Lopez-Berestein, G. 2002. Liposomal-all-*trans*-retinoic acid in treatment of acute promyelocytic leukemia. Leuk. Lymphoma 43: 933-941.
3. Hercule, H.C., et al. 2003. Contribution of cytochrome P450 4A isoforms to renal functional response to inhibition of nitric oxide production in the rat. J. Physiol. 551: 971-979.
4. Taimi, M., et al. 2004. A novel human cytochrome P450, CYP26C1, involved in metabolism of 9-*cis* and all-*trans* isomers of retinoic acid. J. Biol. Chem. 279: 77-85.
5. Nelson, D.R., et al. 2004. Comparison of cytochrome P450 (CYP) genes from the mouse and human genomes, including nomenclature recommendations for genes, pseudogenes and alternative-splice variants. Pharmacogenetics 14: 1-18.
6. Idres, N., et al. 2005. Regulation of CYP26A1 expression by selective RAR and RXR agonists in human NB4 promyelocytic leukemia cells. Biochem. Pharmacol. 69: 1595-1601.

CHROMOSOMAL LOCATION

Genetic locus: CYP26C1 (human) mapping to 10q23.33; Cyp26c1 (mouse) mapping to 19 C2.

SOURCE

CYP26C1 (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CYP26C1 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.

Blocking peptide available for competition studies, sc-164134 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CYP26C1 (P-12) is recommended for detection of CYP26C1 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with CYP26A1 or CYP26B1.

CYP26C1 (P-12) is also recommended for detection of CYP26C1 in additional species, including bovine and porcine.

Suitable for use as control antibody for CYP26C1 siRNA (h): sc-90570, CYP26C1 siRNA (m): sc-142666, CYP26C1 shRNA Plasmid (h): sc-90570-SH, CYP26C1 shRNA Plasmid (m): sc-142666-SH, CYP26C1 shRNA (h) Lentiviral Particles: sc-90570-V and CYP26C1 shRNA (m) Lentiviral Particles: sc-142666-V.

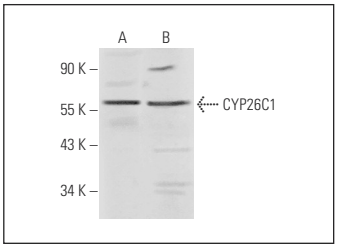
Molecular Weight of CYP26C1: 57 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CYP26C1 (P-12): sc-164134. Western blot analysis of CYP26C1 expression in K-562 (**A**) and Hep G2 (**B**) whole cell lysates.

STORAGE

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

RESEARCH USE

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