

CYP24 (H-87): sc-66851

BACKGROUND

P450 enzymes constitute a family of monooxygenase enzymes that are involved in the metabolism of a wide array of endogenous and xenobiotic compounds. P450 enzymes can be classified, based on their sequence similarities, into distinct subfamilies, which include CYP1A and CYP2A. The P450 family member CYP19 catalyzes the conversion of C19 steroids to estrogens in various tissues, including placenta, gonads, adipose tissue, skin and brain. P450 cholesterol 7 α -hydroxylase, CYP7A1, is the rate limiting enzyme of bile acid synthesis in the liver, and its expression is mediated by the bile acid receptor FXR. CYP27A1 catalyzes vitamin D 25-hydroxylation and is localized to the mitochondria in kidney and liver. Overexpression of CYP24 (encoding vitamin D 24-hydroxylase) is likely to lead to abrogation of growth control mediated by vitamin D.

CHROMOSOMAL LOCATION

Genetic locus: CYP24A1 (human) mapping to 20q13.2; Cyp24a1 (mouse) mapping to 2 H3.

SOURCE

CYP24 (H-87) is a rabbit polyclonal antibody raised against amino acids 351-437 mapping near the C-terminus of CYP24 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CYP24 (H-87) is recommended for detection of CYP24 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

CYP24 (H-87) is also recommended for detection of CYP24 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CYP24 siRNA (h): sc-44652, CYP24 siRNA (m): sc-44653, CYP24 shRNA Plasmid (h): sc-44652-SH, CYP24 shRNA Plasmid (m): sc-44653-SH, CYP24 shRNA (h) Lentiviral Particles: sc-44652-V and CYP24 shRNA (m) Lentiviral Particles: sc-44653-V.

Molecular Weight of CYP24: 59 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, mouse pancreas extract: sc-364244 or mouse liver extract: sc-2256.

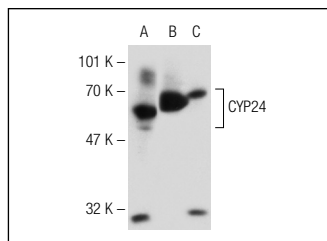
STORAGE

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

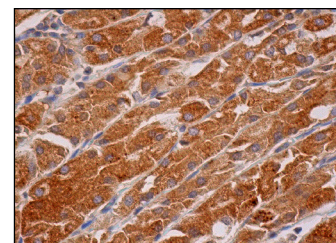
RESEARCH USE

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

DATA



CYP24 (H-87): sc-66851. Western blot analysis of CYP24 expression in MIA PaCa-2 whole cell lysate (A) and mouse pancreas (B) and mouse liver (C) tissue extracts.



CYP24 (H-87): sc-66851. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Chow, E.C., et al. 2010. Effects of 1 α ,25-dihydroxyvitamin D₃ on transporters and enzymes of the rat intestine and kidney *in vivo*. *Biopharm. Drug Dispos.* 31: 91-108.
- Blomberg Jensen, M., et al. 2010. Vitamin D receptor and vitamin D metabolizing enzymes are expressed in the human male reproductive tract. *Hum. Reprod.* 25: 1303-1311.
- Stubbs, J.R., et al. 2010. Cholecalciferol supplementation alters calcitriol-responsive monocyte proteins and decreases inflammatory cytokines in ESRD. *J. Am. Soc. Nephrol.* 21: 353-361.
- Blomberg Jensen, M., et al. 2010. Expression of the vitamin D receptor, 25-hydroxylases, 1 α -hydroxylase and 24-hydroxylase in the human kidney and renal clear cell cancer. *J. Steroid Biochem. Mol. Biol.* 121: 376-382.
- Chow, E.C., et al. 2010. Effects of 1 α ,25-dihydroxyvitamin D₃ on transporters and enzymes of the rat intestine and kidney *in vivo*. *Biopharm. Drug Dispos.* 31: 91-108.
- Bartik, L., et al. 2010. Curcumin: a novel nutritionally derived ligand of the vitamin D receptor with implications for colon cancer chemoprevention. *J. Nutr. Biochem.* 21: 1153-1161.
- O'Brien, K.O., et al. 2014. Placental CYP27B1 and CYP24A1 expression in human placental tissue and their association with maternal and neonatal calcitropic hormones. *J. Clin. Endocrinol. Metab.* 99: 1348-1356.
- Singh, T., et al. 2015. AT1R blockade in adverse milieu: role of SMRT and corepressor complexes. *Am. J. Physiol. Renal Physiol.* 309: F189-F203.

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Try **CYP24 (E-7): sc-365700**, our highly recommended monoclonal alternative to CYP24 (H-87).