

CYP26A1 (F27 P6 A1): sc-53618

BACKGROUND

The cytochrome P450 proteins (CYPs) are monooxygenases 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. CYP26A1, also referred to as retinoic acid-4-hydroxylase, is a major retinoic acid catabolic enzyme. CYP26A1 plays an important role in protecting tailbud tissues from inappropriate exposure to retinoic acid. CYP26A1 transcription is epigenetically regulated by nuclear retinoic acid receptor β 2. Mutations in the gene encoding for CYP26A1 are associated with caudal agenesis and spina bifida, imperforate anus, agenesis of the caudal portions of the digestive and urogenital tracts, and malformed lumbosacral skeletal elements. CYP26A1 is upregulated in adenomatous polyposis coli mouse adenomas, human FAP adenomas, human sporadic colon carcinomas, and in the intestine of adenomatous polyposis coli (*apc^{mcr}*) mutant zebrafish embryos.

CHROMOSOMAL LOCATION

Genetic locus: CYP26A1 (human) mapping to 10q23.33; Cyp26a1 (mouse) mapping to 19 C2.

SOURCE

CYP26A1 (F27 P6 A1) is a mouse monoclonal antibody raised against the C-terminus of CYP26A1 of human origin.

PRODUCT

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

CYP26A1 (F27 P6 A1) is available conjugated to agarose (sc-53618 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53618 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53618 PE), fluorescein (sc-53618 FITC), Alexa Fluor® 488 (sc-53618 AF488), Alexa Fluor® 546 (sc-53618 AF546), Alexa Fluor® 594 (sc-53618 AF594) or Alexa Fluor® 647 (sc-53618 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53618 AF680) or Alexa Fluor® 790 (sc-53618 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CYP26A1 (F27 P6 A1) is recommended for detection of CYP26A1 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CYP26A1 siRNA (h): sc-72077, CYP26A1 siRNA (m): sc-77074, CYP26A1 shRNA Plasmid (h): sc-72077-SH, CYP26A1 shRNA Plasmid (m): sc-77074-SH, CYP26A1 shRNA (h) Lentiviral Particles: sc-72077-V and CYP26A1 shRNA (m) Lentiviral Particles: sc-77074-V.

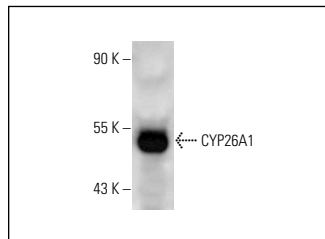
Molecular Weight of CYP26A1: 49 kDa.

Positive Controls: human ovary tumor tissue extract.

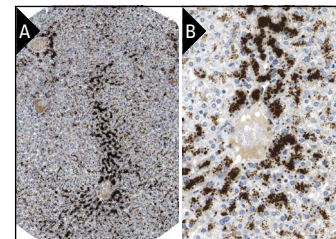
STORAGE

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

DATA



CYP26A1 (F27 P6 A1): sc-53618. Western blot analysis of CYP26A1 expression in human ovary tumor tissue extract.



CYP26A1 (F27 P6 A1): sc-53618. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining in hepatocytes and bile duct cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program. Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

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- Duprey-Díaz, M.V., et al. 2016. Optic nerve injury upregulates retinoic acid signaling in the adult frog visual system. *J. Chem. Neuroanat.* 77: 80-92.
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- Woloszynowska-Fraser, M.U., et al. 2021. Differential retinoic acid signaling in the hippocampus of aged rats with and without memory impairment. *eNeuro* 8: ENEURO.0120-21.2021.
- Horiguchi, K., et al. 2022. The multiciliated cells in Rathke's cleft express CYP26A1 and respond to retinoic acid in the pituitary. *Cell Tissue Res.* 388: 583-594.
- Hiyama, Y., et al. 2022. *In vitro* transfection of up-regulated genes identified in favorable-outcome neuroblastoma into cell lines. *Cells* 11: 3171.
- Liu, D., et al. 2022. Primary specification of blastocyst trophectoderm by scRNA-seq: new insights into embryo implantation. *Sci. Adv.* 8: eabj3725.
- He, W., et al. 2023. Metformin reduces hepatocarcinogenesis by inducing downregulation of CYP26A1 and CD8⁺ T cells. *Clin. Transl. Med.* 13: e1465.

RESEARCH USE

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

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