

# CYP2W1 (C-7): sc-374426

## 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. Several P450 enzymes have been classified by sequence similarities as members of the CYP1A and CYP2A subfamilies. CYP2W1 is a 490 amino acid protein that belongs to the CYP2 family of cytochrome P450 proteins. These proteins are usually involved in the metabolism of foreign compounds. CYP2W1 metabolizes arachidonic acid and catalyzes the oxidation of indole. CYP2W1 represents a tumor-specific P450 isoform that is universally conserved in vertebrates and is a potential drug target in cancer therapeutics.

## REFERENCES

1. Ingelman-Sundberg, M. 2005. The human genome project and novel aspects of cytochrome P450 research. *Toxicol. Appl. Pharmacol.* 207: 52-56.
2. Karlgren, M., et al. 2005. Novel extrahepatic cytochrome P450s. *Toxicol. Appl. Pharmacol.* 207: 57-61.
3. Kumarakulasingham, M., et al. 2005. Cytochrome P450 profile of colorectal cancer: identification of markers of prognosis. *Clin. Cancer Res.* 11: 3758-3765.
4. Karlgren, M., et al. 2006. Tumor-specific expression of the novel cytochrome P450 enzyme, CYP2W1. *Biochem. Biophys. Res. Commun.* 341: 451-458.
5. Yoshioka, H., et al. 2006. Enzymatic properties of human CYP2W1 expressed in *Escherichia coli*. *Biochem. Biophys. Res. Commun.* 345: 169-174.

## CHROMOSOMAL LOCATION

Genetic locus: CYP2W1 (human) mapping to 7p22.3.

## SOURCE

CYP2W1 (C-7) is a mouse monoclonal antibody raised against amino acids 121-295 mapping within an internal region of CYP2W1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CYP2W1 (C-7) is available conjugated to agarose (sc-374426 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374426 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374426 PE), fluorescein (sc-374426 FITC), Alexa Fluor® 488 (sc-374426 AF488), Alexa Fluor® 546 (sc-374426 AF546), Alexa Fluor® 594 (sc-374426 AF594) or Alexa Fluor® 647 (sc-374426 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374426 AF680) or Alexa Fluor® 790 (sc-374426 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

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

## APPLICATIONS

CYP2W1 (C-7) is recommended for detection of CYP2W1 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for CYP2W1 siRNA (h): sc-60487, CYP2W1 shRNA Plasmid (h): sc-60487-SH and CYP2W1 shRNA (h) Lentiviral Particles: sc-60487-V.

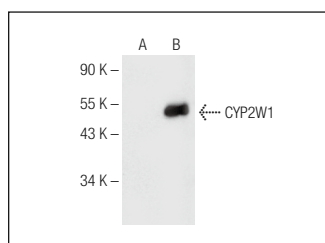
Molecular Weight of CYP2W1: 54 kDa.

Positive Controls: CYP2W1 (h): 293T Lysate: sc-114053 or Hep G2 cell lysate: sc-2227.

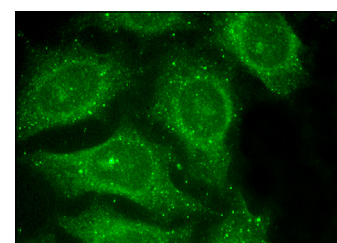
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CYP2W1 (C-7): sc-374426. Western blot analysis of CYP2W1 expression in non-transfected: sc-117752 (A) and human CYP2W1 transfected: sc-114053 (B) 293T whole cell lysates.



CYP2W1 (C-7): sc-374426. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Nolé, P., et al. 2016. Human cytochrome P450 2W1 is not expressed in adrenal cortex and is only rarely expressed in adrenocortical carcinomas. *PLoS ONE* 11: e0162379.
2. Wang, Y., et al. 2020. The antitumour activity of 2-(4-amino-3-methylphenyl)-5-fluorobenzothiazole in human gastric cancer models is mediated by AhR signalling. *J. Cell. Mol. Med.* 24: 1750-1759.

## RESEARCH USE

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