SANTA CRUZ BIOTECHNOLOGY, INC.

CYP2W1 (F-4): sc-398523

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., Miura, S. and Ingelman-Sundberg, M. 2005. Novel extrahepatic cytochrome P450s. Toxicol. Appl. Pharmacol. 207: 57-61.
3. Kumarakulasingham, M., Rooney, P.H., Dundas, S.R., Telfer, C., Melvin, W.T., Curran, S. and Murray, G.I. 2005. Cytochrome P450 profile of colorectal cancer: identification of markers of prognosis. Clin. Cancer Res. 11: 3758-3765.
4. Karlgren, M., Gomez, A., Stark, K., Svärd, J., Rodriguez-Antona, C., Oliw, E., Bernal, M.L., Ramón y Cajal, S., Johansson, I. and Ingelman-Sundberg, M. 2006. Tumor-specific expression of the novel cytochrome P450 enzyme, CYP2W1. Biochem. Biophys. Res. Commun. 341: 451-458.
5. Yoshioka, H., Kasai, N., Ikushiro, S., Shinkyo, R., Kamakura, M., Ohta, M., Inouye, K. and Sakaki, T. 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 (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 264-293 within an internal region of CYP2W1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398523 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

CYP2W1 (F-4) 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.

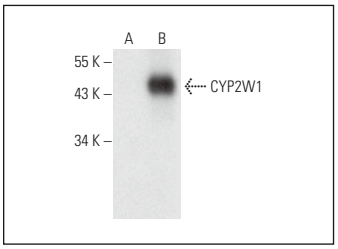
Molecular Weight of CYP2W1: 54 kDa.

Positive Controls: CYP2W1 (h): 293T Lysate: sc-114053.

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 (F-4): sc-398523. Western blot analysis of CYP2W1 expression in non-transfected: sc-117752 (**A**) and human CYP2W1 transfected: sc-114053 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.