SANTA CRUZ BIOTECHNOLOGY, INC.

CYP2C6 (K1): sc-53245

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The cytochrome P450 family is responsible for oxidation of many therapeutic agents as well as steroids, fatty acids and many other endogenous substances. The cytochrome P4502C subfamily comprises a group of constitutive microsomal hemoproteins which are expressed primarily in liver and which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. In humans, this subfamily is responsible for metabolism of a variety of therapeutic drugs such as warfarin, mephenytoin, omeprazole and anti-inflammatory drugs. CYP2C6 is a form of rat liver microsomal cytochrome P450 that is expressed and inducible by phenobarbital in differentiated Reuber hepatoma cells that express many hepatocyte-specific genes but is not expressed in the lung, kidney or brain.

REFERENCE

1. Venepally, P., et al. 1992. Transcriptional regulatory elements for basal expression of cytochrome P450IIC genes. J. Biol. Chem. 267: 17333-17338.
2. Shaw, P.M., et al. 1994. Hepatocyte nuclear factor 3 is a major determinant of CYP2C6 promoter activity in hepatoma cells. Mol. Pharmacol. 46: 79-87.

SOURCE

CYP2C6 (K1) is a mouse monoclonal antibody raised against CYP2C6 purified from rat liver.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CYP2C6 (K1) is available conjugated to agarose (sc-53245 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53245 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53245 PE), fluorescein (sc-53245 FITC), Alexa Fluor® 488 (sc-53245 AF488), Alexa Fluor® 546 (sc-53245 AF546), Alexa Fluor® 594 (sc-53245 AF594) or Alexa Fluor® 647 (sc-53245 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53245 AF680) or Alexa Fluor® 790 (sc-53245 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM., 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CYP2C6 (K1) is recommended for detection of CYP2C9 and other CYP2C proteins of human origin, phenobarbital-induced CYP2C proteins of mouse origin, and CYP2C6 of rat 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), 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); non cross-reactive with CYP2C8.

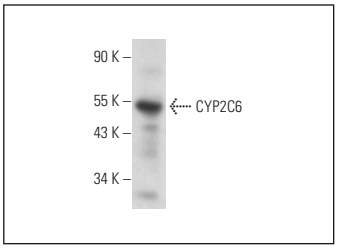
Molecular Weight of CYP2C6: 49 kDa.

Positive Controls: mouse liver extract: sc-2256 or rat liver extract: sc-2395.

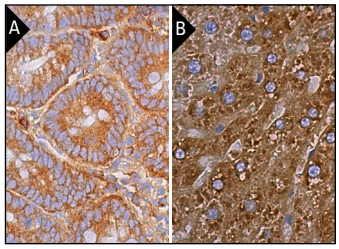
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CYP2C6 (K1): sc-53245. Western blot analysis of CYP2C6 expression in rat liver tissue extract.



CYP2C6 (K1): sc-53245. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat small intestine tissue showing cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat liver tissue showing cytoplasmic staining of hepatocytes (**B**).

SELECT PRODUCT CITATIONS

1. Sun, C., et al. 2016. 11,12-Epoxyecosatrienoic acids mitigate endothelial dysfunction associated with estrogen loss and aging: role of membrane depolarization. J. Mol. Cell. Cardiol. 94: 180-188.
2. Katsuda, T., et al. 2019. Generation of human hepatic progenitor cells with regenerative and metabolic capacities from primary hepatocytes. Elife 8: e47313.
3. Li, Q., et al. 2019. The sub-chronic impact of $mPEG_{2k}$-PCL_x polymeric nanocarriers on cytochrome P450 enzymes after intravenous administration in rats. Eur. J. Pharm. Biopharm. 142: 101-113.
4. Katsuda, T., et al. 2020. Long-term maintenance of functional primary human hepatocytes using small molecules. FEBS Lett. 594: 114-125.

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.