SANTA CRUZ BIOTECHNOLOGY, INC.

CYP3A5 (F18 P3 B6): sc-53616

The Power to Question

BACKGROUND

CYP3A genes encode monooxygenases, enzymes which catalyze drug metabolism and the synthesis of cholesterol, steroids and other lipids. CYP3A (cytochrome P450, family 3, subfamily A), the most abundant p450 enzyme in human liver, is responsible for the metabolism of more than 50% of all clinical drugs. CYP3A members localize in organs that associate with drug disposition, including the liver, gastrointestinal tract and kidney. The CYP3A cluster consists of four genes: CYP3A43, CYP3A4, CYP3A7 and CYP3A5, and two pseudogenes: CYP3A5P1 and CYP3A5P2. The CYP3A cluster maps to gene locus 7q22.1.

REFERENCES

1. Paulussen, A., et al. 2000. Two linked mutations in transcriptional regulatory elements of the CYP3A5 gene constitute the major genetic determinant of polymorphic activity in humans. Pharmacogenetics 10: 415-424.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606534. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Stedman, C., et al. 2004. Feed-forward regulation of bile acid detoxification by CYP3A4: studies in humanized transgenic mice. J. Biol. Chem. 279: 11336-11343.
4. Williams, P.A., et al. 2004. Crystal structures of human cytochrome P450 3A4 bound to metyrapone and progesterone. Science 305: 683-686.
5. Fukami, M., et al. 2005. Cytochrome P450 oxidoreductase gene mutations and Antley-Bixler syndrome with abnormal genitalia and/or impaired steroidogenesis: molecular and clinical studies in 10 patients. J. Clin. Endocrinol. Metab. 90: 414-426.

CHROMOSOMAL LOCATION

Genetic locus: CYP3A5 (human) mapping to 7q22.1.

SOURCE

CYP3A5 (F18 P3 B6) is a mouse monoclonal antibody raised against the C-terminus of CYP3A5 of human origin.

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.

CYP3A5 (F18 P3 B6) is available conjugated to agarose (sc-53616 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53616 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53616 PE), fluorescein (sc-53616 FITC), Alexa Fluor® 488 (sc-53616 AF488), Alexa Fluor® 546 (sc-53616 AF546), Alexa Fluor® 594 (sc-53616 AF594) or Alexa Fluor® 647 (sc-53616 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53616 AF680) or Alexa Fluor® 790 (sc-53616 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CYP3A5 (F18 P3 B6) is recommended for detection of Cytochrome P4503A5 of human 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CYP3A5 siRNA (h): sc-44703, CYP3A5 shRNA Plasmid (h): sc-44703-SH and CYP3A5 shRNA (h) Lentiviral Particles: sc-44703-V.

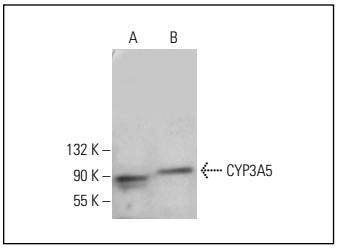
Molecular Weight of CYP3A5: 57 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, c4 whole cell lysate: sc-364186 or Caco-2 cell lysate: sc-2262.

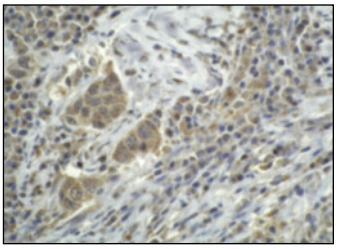
RECOMMENDED SUPPORT REAGENTS

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



CYP3A5 (F18 P3 B6): sc-53616. Western blot analysis of CYP3A5 expression in Hep G2 (**A**) and Caco-2 (**B**) whole cell lysates.



CYP3A5 (F18 P3 B6): sc-53616. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human esophagus cancer showing cytoplasmic and membrane staining.

SELECT PRODUCT CITATIONS

1. Peng, B., et al. 2012. Microarray-assisted pathway analysis identifies MT1X & NFκB as mediators of TCRP1-associated resistance to cisplatin in oral squamous cell carcinoma. PLoS ONE 7: e51413.
2. Kuang, Z., et al. 2015. Overexpression of CYP3A5 attenuates inducibility and activity of CYP3A4 in Hep G2 cells. Mol. Med. Rep. 11: 2868-2874.

STORAGE

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