

CYP3A7 (F19 P2 H2): sc-53617

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

- Paulussen, A., Lavrijsen, K., Bohets, H., Hendrickx, J., Verhasselt, P., Luyten, W., Konings, F. and Armstrong, M. 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.
- 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/>
- Williams, P.A., Cosme, J., Vinkovic, D.M., Ward, A., Angove, H.C., Day, P.J., Vonrhein, C., Tickle, I.J. and Jhoti, H. 2004. Crystal structures of human cytochrome P450 3A4 bound to metyrapone and progesterone. *Science* 305: 683-686.
- Stedman, C., Robertson, G., Coulter, S. and Liddle, C. 2004. Feed-forward regulation of bile acid detoxification by CYP3A4: studies in humanized transgenic mice. *J. Biol. Chem.* 279: 11336-11343.

CHROMOSOMAL LOCATION

Genetic locus: CYP3A7 (human) mapping to 7q22.1.

SOURCE

CYP3A7 (F19 P2 H2) is a mouse monoclonal antibody raised against the C-terminus of CYP3A7 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CYP3A7 (F19 P2 H2) is available conjugated to agarose (sc-53617 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53617 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53617 PE), fluorescein (sc-53617 FITC), Alexa Fluor® 488 (sc-53617 AF488), Alexa Fluor® 546 (sc-53617 AF546), Alexa Fluor® 594 (sc-53617 AF594) or Alexa Fluor® 647 (sc-53617 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53617 AF680) or Alexa Fluor® 790 (sc-53617 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

CYP3A7 (F19 P2 H2) is recommended for detection of Cytochrome P4503A7 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 CYP3A7 siRNA (h): sc-44708, CYP3A7 shRNA Plasmid (h): sc-44708-SH and CYP3A7 shRNA (h) Lentiviral Particles: sc-44708-V.

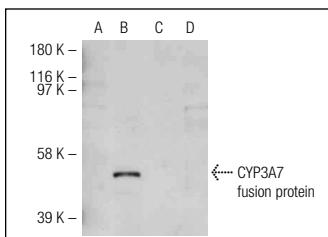
Molecular Weight of CYP3A7: 57 kDa.

RECOMMENDED SUPPORT REAGENTS

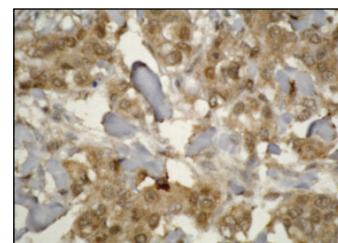
To ensure optimal results, the following support reagents are recommended:

- Western Blotting: use m-IgG_x BP-HRP: sc-516102 or m-IgG_x 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgG_x BP-FITC: sc-516140 or m-IgG_x BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- Immunohistochemistry: use m-IgG_x BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CYP3A7 (F19 P2 H2): sc-53617. Western blot analysis of human recombinant CYP3A4 (**A**), CYP3A7 (**B**), CYP3A5 (**C**) and negative control (**D**) fusion proteins.



CYP3A7 (F19 P2 H2): sc-53617. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human prostate cancer showing cytoplasmic and membrane staining.

SELECT PRODUCT CITATIONS

- Zia, H., Murray, G.I., Vyhlidal, C.A., Leeder, J.S., Anwar, A.E., Bui, M.M. and Ahmed, A.A. 2015. CYP3A isoforms in Ewing's sarcoma tumours: an immunohistochemical study with clinical correlation. *Int. J. Exp. Pathol.* 96: 81-86.

STORAGE

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