

CYP3A (H-300): sc-25845

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

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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. Williams, P.A., et al. 2004. Crystal structures of human cytochrome P450 3A4 bound to metyrapone and progesterone. *Science* 305: 683-686.
4. 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.
5. Persson, K.P., et al. 2005. Evaluation of human liver slices and reporter gene assays as systems for predicting the cytochrome P450 induction potential of drugs *in vivo* in humans. *Pharm. Res.* Published ahead of print.
6. Hidaka, M., et al. 2005. Transient inhibition of CYP3A in rats by star fruit juice. *Drug Metab. Dispos.* Published ahead of print.
7. Mueller, S.C., et al. 2006. The extent of induction of CYP3A by St. John's wort varies among products and is linked to hyperforin dose. *Eur. J. Clin. Pharmacol.* 62: 29-36.
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SOURCE

CYP3A (H-300) is a rabbit polyclonal antibody raised against amino acids 204-503 mapping at the C-terminus of CYP3A4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CYP3A (H-300) is recommended for detection of all CYP3A family members of mouse, rat and 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

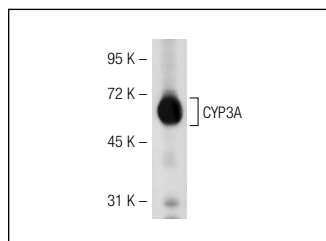
Molecular Weight of CYP3A: 52-55 kDa.

Positive Controls: mouse liver extract: sc-2256.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CYP3A (H-300): sc-25845. Western blot analysis of CYP3A expression in mouse liver tissue extract.

SELECT PRODUCT CITATIONS

1. Fujita, T., et al. 2008. Contribution of down-regulation of intestinal and hepatic cytochrome P450 3A to increased absorption of cyclosporine A in a rat nephrosis model. *J. Pharmacol. Exp. Ther.* 327: 592-599.

RESEARCH USE

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



Try **CYP3A (B-3): sc-365415** or **CYP3A (H-10): sc-390768**, our highly recommended monoclonal alternatives to CYP3A (H-300).