Product Information

Human Cytochrome P450 1A1 (CYP1A1) YR

ORDERING INFORMATION

Catalogue Number: M40003

Size: 1 nmol

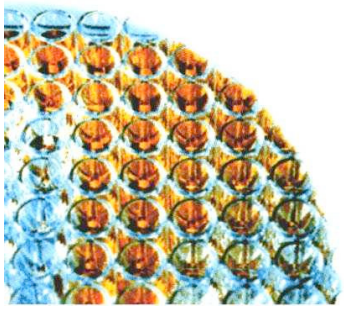
Stability: ≥ 2 years at -80 °C

Storage: -80 °C
Avoid frequent temperature changes
Thaw on ice

Shipping: dry ice

For research laboratory use only.

Not for human diagnostic use.



- **PRODUCT DESCRIPTION**

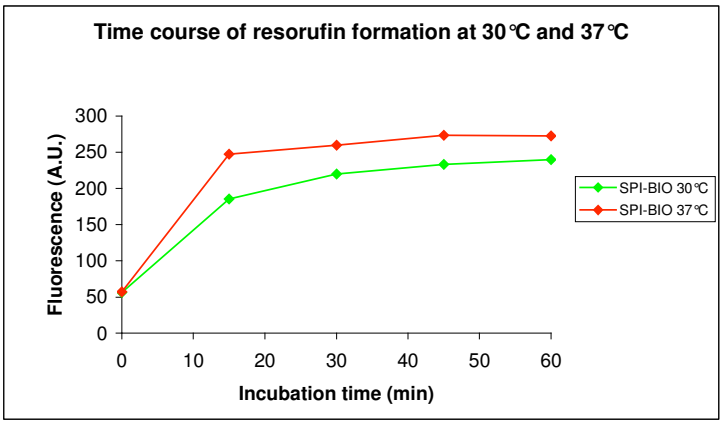
Microsome contents:	Human CYP1A1 and yeast CYP-reductase coexpressed in *Saccharomyces cerevisiae*
Storage buffer:	50 mM Tris (pH 7.4), 1 mM EDTA, 20 % glycerol

- **BATCH** **XXXX (below typical batch characteristics)**

P450 concentration:	1 nmol/ml, spectral measurement
Protein concentration:	9.5 mg/ml, measured using DC-assay Biorad™
Specific content:	105 pmol/mg protein
Cytochrome c Reductase activity:	1 200 nmol/min/mg protein

- **P450 ACTIVITY DATA (below typical activity data)**

Activity measured:	7-ethoxyresorufin-O-deethylase
Activity value:	30 pmol/min/pmol P450



Should you wish further information, do not hesitate to contact us.

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QC ASSAY METHOD

- This assay is specific for the measurement of CYP1A1.
- 1 ml of reaction mixture containing 4 pmol of CYP1A1 is incubated at 30°C for 5 min in 50 mM Tris (pH 7.4), 1 mM EDTA, 60 µM NADPH and 13.2 µM of 7-ethoxyresorufin.
- The fluorescence of the product is determined continuously with excitation at 530 nm and emission at 586 nm in a spectrofluorometer. The activity is calculated by measuring the slope in the linear part of the curve and quantitated by using a calibration curve of resorufin.

N.B.: time course of resorufin formation presented in the figure overleaf is determined following the QC assay method. Other drug/substrate or operating conditions may exhibit different time course of product formation.

ADVICE

- Thaw rapidly on ice and keep on ice until use.
- Aliquot to minimise freeze-thawing cycles
- This assay can be done in a 96-well plate or directly in a tube.
- Temperature from 28°C to 37°C may be used.
- We strongly suggest to assess your drug/substrate using the buffer mentioned above (assay method).

SAFETY PRECAUTION

The toxicological properties of this reagent have not been investigated. Exercise due care when handling.

Product supplied by SPI-BIO may be harmful if misused. Any product ordered from SPI-BIO must not be used for any purpose other than the intended use specified herein. Please ensure that the product is used safely, and, in particular, that it does not come into direct human contact.

Normal precautions in handling laboratory reagents should be applied. We recommend the use of gloves, lab coats and eye protection when working with any chemical reagents. Do not pipet liquids by mouth. Do not eat, drink or smoke in area in which chemical reagents are handled. Avoid splashing.

FOR FURTHER READING

1. G. Truan, C. Cullin, P. Reisdorf, P. Urban, & D. Pompon. Enhanced in vivo monooxygenase activities of mammalian P450s in engineered yeast cells producing high levels of NADPH-P450 reductase and human cytochrome b5. *Gene* **125**, 49-55 (1993).
2. J.C. Gautier, P. Urban, P. Beaune, & D. Pompon. Engineered yeast cells as model to study coupling between human xenobiotic metabolising enzymes: simulation of the two first steps of benzo[a]pyrene activation. *Eur J Biochem* **211**, 63-72 (1993).
3. P. Urban, G. Truan, & D. Pompon. Xenobiotic metabolism in humanised yeast: engineered yeast cells producing human NADPH-cytochrome P450 reductase, cytochrome b5, epoxide hydrolase and P450s. *Biochem Soc Transac* **21**, 1028-1033 (1993).
4. M.A. Peyronneau, J.P. Renaud, M. Jaouen, P. Urban, C. Cullin, D. Pompon, & D. Mansuy. Expression in yeast of three allelic cDNAs coding for human liver P450 3A4: different stabilities, binding properties and catalytic activities of the yeast-produced enzymes. *Eur J Biochem* **218**, 355-361 (1993).
5. J.P. Renaud, M.A. Peyronneau, P. Urban, G. Truan, C. Cullin, D. Pompon, P. Beaune, & D. Mansuy. Recombinant yeast in drug metabolism.*Toxicology Letters* **82**, 39-52 (1993).
6. D. Pompon, J.C. Gautier, A. Perret, G. Truan and P. Urban. Simulation of human xenobiotic metabolism in microorganisms: yeast a good compromise between E. coli and human cells. *J. Hepatol.* **26** 80-84 (1997).

PURCHASING INFORMATION

By purchasing this product you accept the terms and conditions of supply. Purchasing information is available from SPI-BIO upon request. Materiel required but not supplied: Buffer, NADPH (or regenerating system), test drug/substrate and distilled or deionized water.