ISOCYPTOX

A NOVEL CELL-BASED AND READY-TO-USE CONCEPT FOR IN VITRO EVALUATION OF BIOTRANSFORMATION-MEDIATED METABOLIC TOXICITY

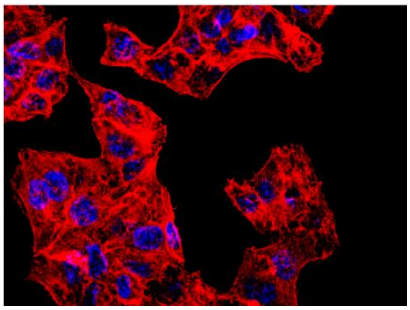
IsoCyp-Tox is an innovative cell-based and ready-to-use kit. The kit consists of 96-well plates seeded with the hepatic cell line HepG2 transiently transduced with individual human CYP450 isoforms, making these cells metabolically competent. **IsoCyp-Tox** allows *in vitro* detection and screening of biotransformation mediated-toxicity of lead and drug targets in just one single experiment. **IsoCyp-Tox** is a powerful as well as time and cost-saving tool during hit-to-lead and lead optimization phases in early stage of drug discovery and development.

IsoCyp–Tox Applications

- Early detection and screening of potential bioactivation-dependent acute toxicity of target compounds
- Identification of CYP isoforms involved in potential production of toxic metabolites
- Metabolic activation screening

IsoCyp–Tox Features

- Ready-to-use
- Single human CYP450 isoform expression (3A4, 2E1, 1A2, 2A6, 2C9, 2C19)
- High CYP450 isoform activities
- 96-well plate format
- Customizable plate design
- Exclusive solid shipping medium



Wild type hepatic human cell line

IsoCyp–Tox Benefits

- Suitable to current toxicity end-points (MTT, WST1, LDH, ATP, etc) without specific know-how
- Cost-effective and time saving due to reduction of in-house maintenance and handling of cell cultures
- Identification of specific CYPs involved in potential production of toxic metabolites in just one experiment
- Designed to allow dose-response studies & IC50 curve fitting at early stage
- High reproducibility
- Adaptable to automated procedures and High Throughput Screening
- Available for just-in-time use
- Similar or even higher CYP activity levels than those observed in fresh human hepatocytes
- Shipping medium easily to remove by liquefaction at 37ºC

READYCELL
easing your screening

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ISO 9001:2008

IsoCyp-Tox is a product manufactured in compliance with ISO 9001:2008

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IsoCyp–Tox Experimental Data: Curve fitting of IC50 values of test compounds

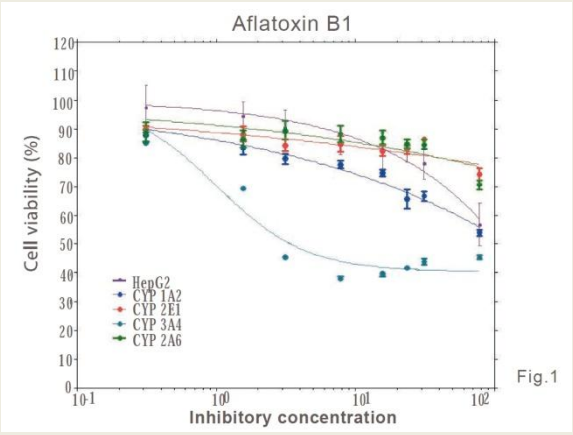

Fig.1

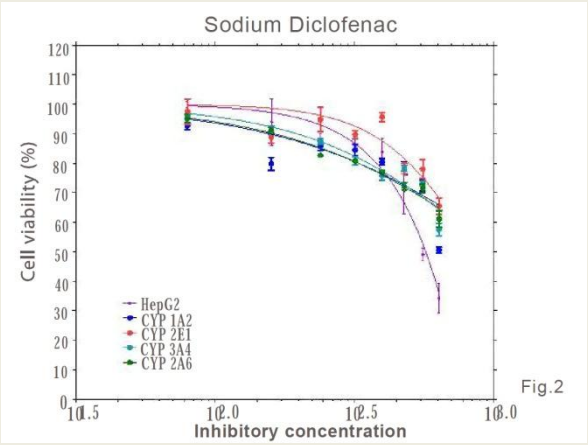

Fig.2

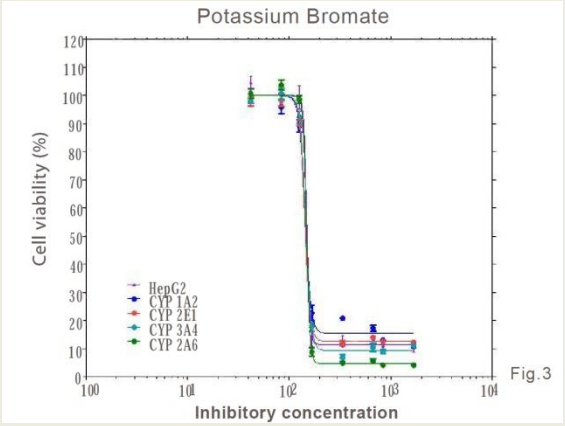

Fig.3

Wild type hepatic human cell line (HepG2) transiently transduced with human CYP450 isoforms 1A2, 2E1, 3A4 and 2A6. For endpoint WST-1 assay, figures show, specific bioactivation in 3A4 and, to a lesser extend, in 1A2 for Aflatoxin B1 (Fig.1); parent compound toxicity for sodium diclofenac (Fig.2) and general toxicity for potassium bromate (nonmediated by CYP450 specific metabolism) (Fig.3)

FOUR SIMPLE STEPS OF IsoCyp–Tox

RECEIVE	***LIQUIFY***	***APPLY***	***ASSAY***
Ready-to-use HepG2 transiently transduced cell line	Liquefying of solid shipping medium at 37ºC	Incubation with test compound	Assessment of a simple toxicity end point

Formats

IsoCyp-Tox standard kit containing 7 x 96-well plates, Ref. KRECE-ICT50:

- 6 x 96-well plates of HepG2 transduced with single CYP450 isoform, including 1 x 96-well plate for each CYP450 isoform (3A4, 2E1, 1A2, 2A6 , 2C9 and 2C19)
- 1 x 96-well control plate of HepG2 untransduced (metabolic incompetent cells)

IsoCyp-Tox individual CYP450 kit containing 2 x 96-well plates:

- 1 x 96-well plate of HepG2 transduced with single CYP450 of interest:

3A4: Ref. KRECE-ICT51, 2E1: Ref. KRECE-ICT52, 1A2: Ref. KRECE-ICT53, 2A6: Ref. KRECE-ICT54, 2C9: Ref. KRECE-ICT55 or 2C19: Ref. KRECE-ICT56

- 1 x 96-well control plate of HepG2 untransduced (metabolic incompetent cells)

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easing your screening

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