The HepG2 cell line: regularly used human liver-based in vitro model

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SCOPE OF THE METHOD

The Method relates to	Human health
The Method is situated in	Basic Research
Type of method	In vitro - Ex vivo
This method makes use of	Human derived cells / tissues / organs
Specify the type of cells/tissues/organs	derived from liver tissue of a male with a well-differentiated hepatocellular carcinoma

DESCRIPTION

Method keywords

cell culture

in vitro tool

variety of fields

unlimited
liver-based

Scientific area keywords

Liver cell biology
protein expression

Method description

HepG2 is a human hepatoma derived cell line, which are epithelial in morphology. It was established from liver tissue of a 15-year-old Caucasian male with a well differentiated hepatocellular carcinoma. The HepG2 cell line is one of the most used human liver-based *in vitro* models. The cells secrete a variety of major plasma proteins (e.g. albumin), but show low levels of biotransformation enzymes. HepG2 cells grow mainly in islands after which they form a monolayer. They have been widely used in a variety of fields such as the study of hepatocyte function and specific protein expression.

Lab equipment

Laminar flow hood;
Phase contrast microscope;
Incubator;
Water bath (automatic);
Micropipettes;
Centrifuge.

Method status

History of use

PROS, CONS & FUTURE POTENTIAL

Advantages

High stability;
Unlimited life span

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

Associated documents

PARTNERS AND COLLABORATIONS

Organisation

Name of the organisation Vrije Universiteit Brussel (VUB)

Department Pharmaceutical and Pharmacological Sciences

Specific Research Group or Service In Vitro Toxicology and Dermato-Cosmetology

Country Belgium

Geographical Area Brussels Region

Coordinated by

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