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

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Organisation

Name of the organisation Vrije Universiteit Brussel (VUB)
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Specific Research Group or Service In Vitro Toxicology and Dermato-Cosmetology
Country Belgium
Geographical Area Brussels Region

SCOPE OF THE METHOD

The Method relates to	Human health
The Method is situated in	Basic Research
Type of method	In vitro - Ex vivo
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

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