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

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Organisation

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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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