

Measurement of Albumin Secretion as Functionality Test

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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

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	parenchymal liver cells, stem cell-derived hepatocyte-like cells

DESCRIPTION

Method keywords

ELISA

albumin

Scientific area keywords

in vitro cell culture
hepatic in vitro model
hepatic differentiation
liver cells

Method description

Albumin secretion in the supernatant of *in vitro* cultures can be measured by an enzyme-linked immunosorbent assay. The assay is based upon a quantitative sandwich enzyme immunoassay technique and measures albumin in the culture medium of primary hepatocytes and/or hepatocyte like cells. Standards and samples are sandwiched between an immobilized polyclonal antibody and a biotinylated polyclonal antibody specific for albumin. The latter is recognized by a streptavidinperoxidase conjugate and after adding a peroxidase enzyme substrate, a blue color is developed. The blue product, on its turn, is converted towards a yellow derivative of which the absorbance can be measured at 450 nm.

Lab equipment

Multiplate reader.

Method status

History of use

PROS, CONS & FUTURE POTENTIAL

Advantages

Easy to use.

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

References

Bolley et al. Effect of Trichostatin A on miRNA expression in cultures of primary rat hepatocytes. *Toxicol In Vitro*. 2011 Sep;25(6):1173-82

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