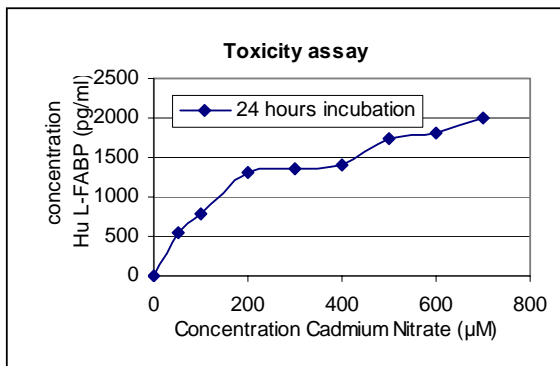


HBT ELISA TEST KITS FOR LIVER FATTY ACID BINDING PROTEIN

The Hbt Liver FABP kit has been developed for the quantitative measurement of liver FABP in serum, plasma and urine of both natural and recombinant origin. Fatty acid binding proteins (FABP) are small (approximately 13-14 kDa) intracellular proteins with a high degree of tissue specificity. Liver FABP is a sensitive marker for cell damage of liver cells in vitro and vivo. Fatty acid-binding proteins (FABPs) are a class of cytoplasmic proteins that bind long chain fatty acids. They are abundantly present in various cell types and seem to play an important role in the intracellular utilization of fatty acids. There are at least six distinct types of FABP, each showing a specific pattern of tissue expression. FABP leaks due to its small size rapidly out of ischemically damaged dying cells leading to a rise in serum levels. Ischemically damaged tissues are characterized histologically by absence (or low presence) of FABP facilitating recognition of such areas. Next to this L-FABP is a marker for rapid hepatocyte lysis in vitro (as for example in toxicology assays) and for detection of liver damage during and after transplantation.



Cytotoxicity protocol

- * Culture 100 µl of 1.10^5 HUH-7 cells per ml in 96-wells plate.
- * T=0: Add 100 µl of 2x test chemicals to 96-wells plate.
- * Incubate 37 °C, 5% CO₂.
- * T=24: measure L-FABP in supernatant.

PRINCIPLE OF THE TEST

The Hbt Liver FABP (L-FABP) test is a solid-phase enzyme-linked immunosorbent assays based on the sandwich principle.

Samples and standards are incubated in microtiter wells coated with antibodies recognizing L-FABP. During this incubation L-FABP is captured by solid bound antibody. Unbound material present in the sample is removed by washing. Next biotinylated second antibody (tracer) to L-FABP is added to the wells. If L-FABP was present in the sample, the tracer antibodies will bind to the captured L-FABP. The excess tracer is removed by washing. Next a streptavidin-peroxidase conjugate is applied to the wells, this conjugate reacts specifically with the biotinylated tracer antibody bound onto the detected L-FABP. The excess streptavidin-peroxidase conjugate is removed by washing and substrate, tetramethylbenzidine (TMB) is added to the wells. Colour develops proportionally to the amount of L-FABP present in the sample. The enzyme reaction is stopped by the addition of citric acid and the absorption at 450 nm is measured with a spectrophotometer. A standard curve is obtained by plotting the absorptions versus the corresponding concentrations of the known standards. The L-FABP concentration of samples with unknown concentrations, which are run concurrently with the standards, can be determined from the standard curve.

SPECIAL FEATURES OF THE KIT

- Ready-to-use (i.e. pre-coated microwells).
- High specificity.
- High reproducibility
- High sensitivity.
- Large measurable concentration range.
- Efficient format. Two plates with each twelve 8-well strips allow free choice of batch size for the assay.
- Simple, rapid procedure. Four pipetting steps are required to complete the assay. Working time 3½ hours.

AVAILABILITY

The Hbt Liver FABP test is available in kits for 2 x 96 determinations.

HK404 Hbt Human L-FABP ELISA kit

HK405 Hbt Rat L-FABP kit, cross-reactive with human, swine and mouse

HK408 Hbt Swine L-FABP ELISA kit

For research purposes only.

Caution: Not for use in humans.