ELISA KIT FOR
HUMAN INTESTINAL FATTY ACID BINDING PROTEIN (I-FABP)

Catalog nr     HK406 (2 x 96 determinations)

Description The human intestinal FABP kit has been developed for the quantitative measurement of human intestinal FABP in serum, plasma and urine. Fatty acid binding proteins (FABP) are small (approximately 15 kD) intracellular proteins with a high degree of tissue specificity. Intestinal FABP is specifically localized in the epithelium cells of the small bowel. Normally, I-FABP is undetectable in serum. Due to its small size FABP leaks rapidly out of damaged cells leading to a rise in I-FABP blood and urine levels. Many observations indicate that I-FABP is a useful biochemical marker for intestinal cell damage both in vivo and in vitro. Ischemically damaged cells are characterized histologically by absence (or low presence) of FABP facilitating recognition of areas of ischemically damaged cells. The human I-FABP ELISA can be used for the measurement of sheep and swine I-FABP.

Application The human I-FABP ELISA kit is intended for the quantitative measurement of both natural and recombinant human I-FABP in cell culture medium, serum, plasma and urine. In serum or plasma samples, human I-FABP can be measured accurately if serum or plasma samples are diluted at least 2 times. Most reliable results are obtained if EDTA plasma is used.

Features
- Minimum concentration which can be measured is 20 pg/ml.
- Measurable concentration range of 20 - 5,000 pg/ml.
- Working volume of 100 µl/well.

Typical standard curve

![Human I-FABP ELISA Typical Standard Curve](image)

Principle
- The human intestinal FABP ELISA is a ready-to-use solid-phase enzyme-linked immunosorbent assay based on the sandwich principle with a working time of 3½ hours.
- The efficient format of 2 plates with twelve disposable 8-well strips allows free choice of batch size for the assay.
- Samples and standards are incubated in microtiter wells coated with antibodies recognizing human I-FABP.
- Biotinylated tracer antibody will bind to captured I-FABP.
- Streptavidin-peroxidase conjugate will bind to the biotinylated tracer antibody.
- Streptavidin-peroxidase conjugate will react with the substrate, tetramethylbenzidine (TMB).
- The enzyme reaction is stopped by the addition of citric acid.
- The absorbance at 450 nm is measured with a spectrophotometer. A standard curve is obtained by plotting the absorbance (linear) versus the corresponding concentrations of the human I-FABP standards (log).
- The human I-FABP concentration of samples, which are run concurrently with the standards, can be determined from the standard curve.

Storage and stability
- Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least six months. After reconstitution the reagents are stable for 1 month if stored at 2-8°C.
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Cross Reactivity
Potential cross reacting proteins detected in the human intestinal FABP ELISA

<table>
<thead>
<tr>
<th>Cross reactant</th>
<th>% Cross reactivity</th>
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</thead>
<tbody>
<tr>
<td>Sheep I-FABP</td>
<td>average</td>
</tr>
<tr>
<td>Swine I-FABP</td>
<td>average</td>
</tr>
<tr>
<td>Rat I-FABP</td>
<td>weak</td>
</tr>
<tr>
<td>Human H-FABP</td>
<td>negative</td>
</tr>
<tr>
<td>Human L-FABP</td>
<td>negative</td>
</tr>
</tbody>
</table>

Precautions
For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and Federal rules in the use of this product. Hbt is not responsible for any patent infringements that might result with the use of or derivation of this product.

References

Also available
HK401 Human H-FABP ELISA kit, 1 x 96 determinations
HK402 Human H-FABP ELISA kit, 2 x 96 determinations
HK404 Human L-FABP ELISA kit, 2 x 96 determinations
HK403 Rat/Mouse H-FABP ELISA kit, 2 x 96 determinations
HK405 Rat/Mouse L-FABP ELISA kit, 2 x 96 determinations