Intended use
A high quality enzyme immunoassay for the quantification of rat insulin in serum or plasma.

Test principle
Mercodia Ultrasensitive Rat Insulin ELISA is a solid phase two-site enzyme immunoassay based on the sandwich technique, in which two monoclonal antibodies are directed against separate antigenic determinants on the insulin molecule. Insulin in the sample reacts with anti-insulin antibodies bound to microtitration wells and peroxidase-conjugated anti-insulin antibodies in the solution.

Test characteristics

Sensitivity
The detection limit is ≤0.020 µg/L as determined with the methodology described in ISO11843-Part 4.

Precision
Each sample was analyzed in 4 replicates on 22 different occasions.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Mean value (µg/L)</th>
<th>Coefficient of variation</th>
<th>within assay %</th>
<th>between assay %</th>
<th>total assay %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.11</td>
<td></td>
<td>2.9</td>
<td>4.8</td>
<td>5.0</td>
</tr>
<tr>
<td>2</td>
<td>0.17</td>
<td></td>
<td>2.0</td>
<td>4.2</td>
<td>4.3</td>
</tr>
<tr>
<td>3</td>
<td>0.19</td>
<td></td>
<td>2.6</td>
<td>3.5</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Performance limitations
Grossly lipemic, icteric or haemolyzed samples do not interfere in the assay.

Specificity
The following cross-reactions have been tested:
- Human insulin: 167%
- Human proinsulin: 75%
- Human C-peptide: < 0.05%
- Insulin lispro: 167%
- IGF-I: < 0.02%
- IGF-II: < 0.02%
- Rat proinsulin I: 8%
- Rat proinsulin II: 51%
- Mouse proinsulin I: 33%
- Mouse proinsulin II: 51%
- Mouse C-peptide I: <0.002%
- Mouse C-peptide II: <0.001%
- Rat C-peptide I: <0.03%
- Rat C-peptide II: <0.03%
- Mouse insulin: 75%
- Porcine insulin: 476%
- Ovine insulin: 179%
- Bovine insulin: 78%

Samples
Serum, EDTA and heparin plasma can be used.

Measurement range
0.02 - 1.0 µg/L

Catalog No
10-1251-01  1 x 96 wells