**Product datasheet**

**C-Peptide ELISA Kit ab178641**

**Overview**

**Product name**
C-Peptide ELISA Kit

**Detection method**
Colorimetric

**Precision**

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-peptide</td>
<td>16</td>
<td></td>
<td></td>
<td>&lt;=6.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-peptide</td>
<td>20</td>
<td></td>
<td></td>
<td>&lt;=10%</td>
</tr>
</tbody>
</table>

**Sample type**
Serum, Hep Plasma, Cit plasma

**Assay type**
Sandwich (quantitative)

**Sensitivity**
0.01 ng/ml

**Range**
0.7 ng/ml - 1.9 ng/ml

**Assay duration**
Multiple steps standard assay

**Species reactivity**
Reacts with: Human

**Product overview**
C-peptide ELISA kit (ab178641) is designed for the accurate quantitative measurement of C-peptide in Human serum and plasma.

A 96-well plate has been precoated with Streptavidin. Samples, standards and the C-peptide HRP and Biotin conjugate are added to the wells. Biotinylated monoclonal and horseradish peroxidase (HRP) labelled antibodies are added and the reactants are mixed. The different types of antibodies used have high affinity and specificity and are directed against distinct and different epitopes of C-Peptide. Reaction between the various C-Peptide antibodies and native C-Peptide occurs in the microwells without competition or steric hindrance forming a soluble sandwich complex. After incubation, the wells are washed to remove unbound material and TMB substrate is then added which is catalyzed by HRP to produce blue coloration. The reaction is terminated by addition of Stop Solution which stops the color development and produces a color change from blue to yellow. The intensity of signal is directly proportional to the amount of C-peptide in the sample and the intensity is measured at 450 nm.
**Notes**

C-peptide is the abbreviation for connecting peptide; it is a 31-aminoacid peptide. C-peptide of insulin is the C-terminal cleavage product produced during processing of the insulin pro-hormone to the mature insulin molecule. Proinsulin is cleaved when it is released from the pancreas into the blood - one C-peptide for each insulin molecule. C-Peptide is devoid of any biological activity but appears to be necessary to maintain the structural integrity of Insulin.

**Tested applications**

Suitable for: Sandwich ELISA

**Platform**

Microplate

**Properties**

**Storage instructions**

Store at +4°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>1 x 96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>50X Washing Solution</td>
<td>1 x 20ml</td>
</tr>
<tr>
<td>Cover Foil</td>
<td>1 unit</td>
</tr>
<tr>
<td>C-Peptide HRP and Biotin Conjugate</td>
<td>1 x 13ml</td>
</tr>
<tr>
<td>C-Peptide Standard 0 - 0 ng/mL (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>C-Peptide Standard 1 - 0.2 ng/mL (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>C-Peptide Standard 2 - 1.0 ng/mL (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>C-Peptide Standard 3 - 2.0 ng/mL (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>C-Peptide Standard 4 - 5.0 ng/mL (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>C-Peptide Standard 5 - 10.0 ng/mL (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>1 x 15ml</td>
</tr>
<tr>
<td>Streptavidin Coated Microplate (12 x 8 wells)</td>
<td>1 unit</td>
</tr>
<tr>
<td>Strip holder</td>
<td>1 unit</td>
</tr>
<tr>
<td>TMB Substrate Solution</td>
<td>1 x 15ml</td>
</tr>
</tbody>
</table>

**Function**

Insulin decreases blood glucose concentration. It increases cell permeability to monosaccharides, amino acids and fatty acids. It accelerates glycolysis, the pentose phosphate cycle, and glycogen synthesis in liver.

**Involvement in disease**

Hyperproinsulinemia, familial
Diabetes mellitus, insulin-dependent, 2
Diabetes mellitus, permanent neonatal
Maturity-onset diabetes of the young 10

**Sequence similarities**

Belongs to the insulin family.

**Cellular localization**

Secreted.
Applications

Our Abpromise guarantee covers the use of ab178641 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandwich ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

Images

Representative standard curve using ab178641.

![Typical Standard Curve](image_url)

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