**Product datasheet**

**Human GLP1 (7-36) ELISA Kit  ab184857**

**Overview**

**Product name**  
Human GLP1 (7-36) 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>Human serum</td>
<td>8</td>
<td></td>
<td>7%</td>
<td></td>
</tr>
</tbody>
</table>

**Sample type**  
Cell culture supernatant, Serum, Cell culture media, Heparin Plasma, EDTA Plasma, Citrate Plasma

**Assay type**  
Sandwich (quantitative)

**Sensitivity**  
25 pg/ml

**Range**  
59.6 pg/ml - 1000 pg/ml

**Recovery**

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Average %</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum</td>
<td>109</td>
<td>105% - 112%</td>
</tr>
<tr>
<td>Cell culture media</td>
<td>99</td>
<td>93% - 102%</td>
</tr>
<tr>
<td>Heparin Plasma</td>
<td>110</td>
<td>104% - 112%</td>
</tr>
<tr>
<td>Citrate Plasma</td>
<td>115</td>
<td>107% - 123%</td>
</tr>
</tbody>
</table>

**Sample specific recovery**

**Assay time**  
1h 30m

**Assay duration**  
One step assay
Species reactivity

**Reacts with:** Human

**Predicted to work with:** Mouse, Rat, Sheep, Rabbit, Horse

Product overview

GLP-1(7-36) in vitro SimpleStep ELISA® (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of GLP-1(7-36) active peptide protein in human serum, plasma and culture supernatants.

The SimpleStep ELISA® employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.

Notes

GLP-1 (Glucagon like peptide 1) is part of the group of incretin hormones that are secreted by the gastrointestinal tract in response to food intake to assist glucose stimulated insulin secretion and glucagon suppression. GLP-1 is a 30 aminoacid peptide cleaved from proglucagon and released by the L-cells of the distal ileum. The intracellular precursor of GLP-1 (1-37) is cleaved to form the active peptides GLP-1 (7-37) and GLP-1 (7-36)NH2. The active peptides bind to the GLP-1 receptor (GLP-1r) expressed in the pancreatic beta cell and are quickly metabolized by the enzyme dipeptidyl peptidase IV (DPP-IV) to form the peptide GLP-1 (9-36), which has no insulin stimulating activity. Binding of active GLP-1 to the receptor, increases cAMP levels and potentiates insulin secretion via Protein Kinase A (PKA) and the cAMP-regulated nucleotide exchange factor (Epac2).

GLP-1 and its receptor are also suggested to play a role in the central nervous systems as mediators of satiety. Intracerebroventricular GLP-1 has been shown to induce c-FOS activity in the hypothalamus and the central nucleus of the amygdala, both of which are important in the regulation of appetite.

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>10X GLP1 (7-36) Capture Antibody</td>
<td>1 x 600µl</td>
</tr>
<tr>
<td>10X GLP1 (7-36) Detector Antibody</td>
<td>1 x 600µl</td>
</tr>
<tr>
<td>10X Wash Buffer PT (<a href="https://ab206977">ab206977</a>)</td>
<td>1 x 20ml</td>
</tr>
<tr>
<td>Antibody Diluent CPI - HAMA Blocker (<a href="https://ab193969">ab193969</a>)</td>
<td>1 x 6ml</td>
</tr>
</tbody>
</table>
Relevance
Glucagon plays a key role in glucose metabolism and homeostasis. Regulates blood glucose by increasing gluconeogenesis and decreasing glycolysis. A counterregulatory hormone of insulin, raises plasma glucose levels in response to insulin-induced hypoglycemia. Plays an important role in initiating and maintaining hyperglycemic conditions in diabetes.

Cellular localization
Secreted.

Applications
Our Abpromise guarantee covers the use of ab184857 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
Background-subtracted data values (mean +/- SD) are graphed.
Ten individual healthy donors were evaluated for the presence of GLP-1 in serum using this assay. Serum of each donor was diluted 1/10 using sample diluent NS. The mean levels of GLP-1, after adjusting for dilution factor, were found at 433.5 pg/mL with a standard deviation of 277 pg/mL.

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