**Product datasheet**

**Human Albumin ELISA Kit ab227933**

**SimpleStep ELISA**

5 Images

## Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Human Albumin ELISA Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Colorimetric</td>
</tr>
</tbody>
</table>

### Precision

#### Intra-assay

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum</td>
<td>9</td>
<td></td>
<td></td>
<td>4%</td>
</tr>
</tbody>
</table>

#### Inter-assay

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum</td>
<td>3</td>
<td></td>
<td></td>
<td>12.6%</td>
</tr>
</tbody>
</table>

### Sample type

Urine, Serum, Heparin Plasma, EDTA Plasma, Citrate Plasma

### Assay type

Sandwich (quantitative)

### Sensitivity

30 pg/ml

### Range

312.5 pg/ml - 20000 pg/ml

### Recovery

#### Sample specific recovery

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Average %</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urine</td>
<td>104</td>
<td>101% - 107%</td>
</tr>
<tr>
<td>Serum</td>
<td>117</td>
<td>106% - 133%</td>
</tr>
<tr>
<td>Heparin Plasma</td>
<td>111</td>
<td>104% - 116%</td>
</tr>
<tr>
<td>EDTA Plasma</td>
<td>115</td>
<td>108% - 121%</td>
</tr>
<tr>
<td>Citrate Plasma</td>
<td>112</td>
<td>106% - 117%</td>
</tr>
</tbody>
</table>

### Assay time

1h 30m
### Assay duration
One step assay

### Species reactivity
**Reacts with:** Human  
**Does not react with:** Mouse, Rat, Cow, Rhesus monkey

### Product overview
Albumin in vitro SimpleStep ELISA® (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of Albumin levels in human plasma, serum, and urine.

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.

Albumin (ALB), the main protein of plasma, has a good binding capacity for water, Ca2+, Na+, K+, fatty acids, hormones, bilirubin and drugs. Its main function is the regulation of the colloidal osmotic pressure of blood. It also serves as a major zinc transporter in plasma, typically binding about 80% of all plasma zinc.

### Tested applications
**Suitable for:** Sandwich ELISA

### Platform
Pre-coated microplate (12 x 8 well strips)

### 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>Human Albumin Capture Antibody 10X</td>
<td>1 x 600µl</td>
</tr>
<tr>
<td>10X Human Albumin Detector Antibody</td>
<td>1 x 600µl</td>
</tr>
<tr>
<td>Human Albumin Lyophilized Purified Protein</td>
<td>2 vials</td>
</tr>
<tr>
<td>Antibody Diluent CP</td>
<td>1 x 6ml</td>
</tr>
<tr>
<td>10X Wash Buffer PT (<a href="#">ab206977</a>)</td>
<td>1 x 20ml</td>
</tr>
<tr>
<td>TMB Development Solution</td>
<td>1 x 12ml</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>1 x 12ml</td>
</tr>
<tr>
<td>Sample Diluent NS</td>
<td>1 x 50ml</td>
</tr>
<tr>
<td>SimpleStep Pre-Coated 96-Well Microplate (<a href="#">ab206978</a>)</td>
<td>1 unit</td>
</tr>
<tr>
<td>Plate Seals</td>
<td>1 unit</td>
</tr>
</tbody>
</table>
Function
Serum albumin, the main protein of plasma, has a good binding capacity for water, Ca(2+), Na(+), K(+), fatty acids, hormones, bilirubin and drugs. Its main function is the regulation of the colloidal osmotic pressure of blood. Major zinc transporter in plasma, typically binds about 80% of all plasma zinc.

Tissue specificity
Plasma.

Involvement in disease
Defects in ALB are a cause of familial dysalbuminemic hyperthyroxinemia (FDH) [MIM:103600]. FDH is a form of euthyroid hyperthyroxinemia that is due to increased affinity of ALB for T(4). It is the most common cause of inherited euthyroid hyperthyroxinemia in Caucasian population.

Sequence similarities
Belongs to the ALB/AFP/VDB family.
Contains 3 albumin domains.

Post-translational modifications
Kenitra variant is partially O-glycosylated at Thr-620. It has two new disulfide bonds Cys-600 to Cys-602 and Cys-601 to Cys-606.
Glycated in diabetic patients.
Phosphorylation sites are present in the extracellular medium.
Acetylated on Lys-223 by acetylsalicylic acid.

Cellular localization
Secreted.

Applications
Our Abpromise guarantee covers the use of ab227933 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
ELISA Protocol Summary

Other - Human Albumin ELISA Kit (ab227933)
Background-subtracted data values (mean +/- SD) are graphed.

The concentrations of Serum Albumin were measured in duplicates, interpolated from the Serum Albumin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1:5 million, plasma (citrate) 1:5 million, plasma (heparin) 1:5 million, and plasma (EDTA) 1:10 million. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Serum Albumin concentration was determined to be 39.3 mg/mL in serum, 34.4 mg/mL in plasma (citrate), 30.8 mg/mL in plasma (heparin), and 34.5 mg/mL in plasma (EDTA).

The concentrations of Serum Albumin were measured in duplicates, interpolated from the Serum Albumin standard curves and corrected for sample dilution. Undiluted samples are 1:500. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Serum Albumin concentration was determined to be 6,290 ng/mL in urine.
Serum from ten individual healthy human female donors was measured in duplicate. Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Serum Albumin concentration was determined to be 33.31 mg/mL with a range of 22.5 – 46.2 mg/mL.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit [https://www.abcam.com/abpromise](https://www.abcam.com/abpromise) or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors