Overview

Product name: Human Apolipoprotein AI ELISA Kit (APOA1)
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>Overall</td>
<td></td>
<td></td>
<td></td>
<td>4.9%</td>
</tr>
</tbody>
</table>

**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>Overall</td>
<td></td>
<td></td>
<td></td>
<td>7.2%</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>Overall</td>
<td></td>
<td></td>
<td></td>
<td>7.2%</td>
</tr>
</tbody>
</table>

**Sample type**: Serum, Plasma

**Assay type**: Competitive

**Sensitivity**: 1 µg/ml

**Range**: 0.625 µg/ml - 20 µg/ml

**Recovery**: 98%

**Assay time**: 3h 00m

**Assay duration**: Multiple steps standard assay

**Species reactivity**: Reacts with: Human

**Product overview**

Apolipoprotein AI Human (APOA1) *in vitro* competitive ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of Apolipoprotein AI levels in plasma and serum.

An Apolipoprotein AI specific antibody has been precoated onto 96-well plates and blocked. Standards or test samples are added to the wells and subsequently biotinylated Apolipoprotein AI is added and then followed by washing with wash buffer. Streptavidin-Peroxidase Complex is added and unbound conjugates are washed away with wash buffer. TMB is then used to visualize Streptavidin-Peroxidase enzymatic reaction. TMB is catalyzed by Streptavidin-Peroxidase to produce a blue color product that changes into yellow after adding acidic stop solution. The density of yellow coloration is inversely proportional to the amount of Apolipoprotein AI captured in plate.
Get results in 90 minutes with Human Apolipoprotein AI ELISA Kit (ab189576) from our SimpleStep ELISA® range.

**Tested applications**  
**Suitable for:** Competitive ELISA

**Platform**  
Microplate

**Properties**

**Storage instructions**  
Store at -20°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>1 x 96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>100X Streptavidin-Peroxidase Conjugate</td>
<td>1 x 80µl</td>
</tr>
<tr>
<td>10X Diluent N Concentrate</td>
<td>1 x 30ml</td>
</tr>
<tr>
<td>20X Wash Buffer Concentrate</td>
<td>1 x 30ml</td>
</tr>
<tr>
<td>2X Biotinylated Human Apolipoprotein AI (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>Apolipoprotein AI Microplate (12 x 8 well strips)</td>
<td>1 unit</td>
</tr>
<tr>
<td>Apolipoprotein AI Standard</td>
<td>1 vial</td>
</tr>
<tr>
<td>Chromogen Substrate</td>
<td>1 x 8ml</td>
</tr>
<tr>
<td>Sealing Tapes</td>
<td>3 units</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>1 x 12ml</td>
</tr>
</tbody>
</table>

**Function**  
Participates in the reverse transport of cholesterol from tissues to the liver for excretion by promoting cholesterol efflux from tissues and by acting as a cofactor for the lecithin cholesterol acytransferase (LCAT). As part of the SPAP complex, activates spermatozoa motility.

**Tissue specificity**  
Major protein of plasma HDL, also found in chylomicrons. Synthesized in the liver and small intestine. The oxidized form at Met-110 and Met-136 is increased in individuals with increased risk for coronary artery disease, such as in carrier of the eNOSa/b genotype and exposure to cigarette smoking. It is also present in increased levels in aortic lesions relative to native ApoA-I and increased levels are seen with increasing severity of disease.

**Involvement in disease**  
High density lipoprotein deficiency 2  
High density lipoprotein deficiency 1  
APOA1 mutations may be involved in the pathogenesis of amyloid polyneuropathy-nephropathy Iowa type, also known as amyloidosis van Allen type or familial amyloid polyneuropathy type III (PubMed:3142462 and PubMed:2123470). The clinical picture is dominated by neuropathy in the early stages of the disease and nephropathy late in the course. Death is due in most cases to renal amyloidosis.  
Amyloidosis 8

**Sequence similarities**  
Belongs to the apolipoprotein A1/A4/E family.

**Post-translational modifications**  
Palmitoylated.

Met-110 and Met-136 are oxidized to methionine sulfoxides.
Phosphorylation sites are present in the extracellular medium.

**Cellular localization**
Secreted.

**Applications**
Our Abpromise guarantee covers the use of **ab108804** 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>Competitive ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

**Images**
Apolipoprotein A1 measured in biological fluids and cell culture medium with background signal subtracted (duplicates +/- SD).

**Competitive ELISA - Apolipoprotein A1 (APOA1)**
Human ELISA Kit (ab108804)

**Representative Standard Curve using ab108804**

**Typical Standard Curve**

*Please note:* All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

**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 or contact our technical team.

Terms and conditions
• Guarantee only valid for products bought direct from Abcam or one of our authorized distributors