Product overview

Abcam’s Apolipoprotein A1 (APOA1) Human in vitro ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of apolipoprotein A1 concentrations in plasma, serum, urine, saliva, milk, CSF and cell culture samples.

An Apolipoprotein A1 specific antibody has been precoated onto 96-well plates and blocked. Standards or test samples are added to the wells and subsequently an Apolipoprotein A1 specific biotinylated detection antibody 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 directly proportional to the

Overview

Product name
Human Apolipoprotein A1 ELISA Kit (APOA1)
Detection method
Colorimetric

<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%</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>10.1%</td>
</tr>
</tbody>
</table>

Inter-assay

<table>
<thead>
<tr>
<th>Sample type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell culture supernatant, Saliva, Milk, Urine, Serum, Plasma, Cell culture extracts, Cerebral Spinal Fluid</td>
<td></td>
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</tbody>
</table>

Assay type
Sandwich (quantitative)

Sensitivity
= 3 ng/ml

Range
6.25 ng/ml - 100 ng/ml

Recovery
97%

Assay time
4h 00m

Species reactivity
Reacts with: Human

Product datasheet
Human Apolipoprotein A1 ELISA Kit (APOA1) ab108803
amount of Apolipoprotein A1 captured in plate.

Get results in 90 minutes with Human Apolipoprotein A1 ELISA Kit (ab189576) from our SimpleStep ELISA® range.

The entire kit may be stored at -20°C for long term storage before reconstitution - Avoid repeated freeze-thaw cycles.

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 30µl</td>
</tr>
<tr>
<td>20X Wash Buffer Concentrate</td>
<td>2 x 30µl</td>
</tr>
<tr>
<td>50X Biotinylated Human Apolipoprotein A1 Antibody</td>
<td>1 x 120µl</td>
</tr>
<tr>
<td>Apolipoprotein A1 Microplate (12 x 8 well strips)</td>
<td>1 unit</td>
</tr>
<tr>
<td>Chromogen Substrate</td>
<td>1 x 8ml</td>
</tr>
<tr>
<td>Human Apolipoprotein A1 Standard</td>
<td>1 vial</td>
</tr>
<tr>
<td>Sealing Tapes</td>
<td>3 units</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>1 x 12ml</td>
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</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 acyltransferase (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.

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.

Images

APOA1 measured in various samples showing quantity (microgram) per mL of tested sample.

Typical Standard Curve

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