abcam

Product datasheet

Human Apolipoprotein AI ELISA Kit (APOA1) ab108804

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Overview

Product name Human Apolipoprotein AI ELISA Kit (APOA1)

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Overall				4.8%

Inter-assay

Sample	n	Mean	SD	CV%
Overall				10.1%

Sample type Serum, Plasma

Assay type Competitive

Sensitivity 0.12 µg/ml

Range 0.625 µg/ml - 5 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.

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.

Components	1 x 96 tests
100X Streptavidin-Peroxidase Conjugate	1 x 80µl
10X Diluent N Concentrate	1 x 30ml
2X Biotinylated Human Apolipoprotein AI (Lyophilized)	1 vial
20X Wash Buffer Concentrate	1 x 30ml
Apolipoprotein AI Microplate (12 x 8 well strips)	1 unit
Apolipoprotein AI Standard	1 vial
Chromogen Substrate	1 x 7ml
Sealing Tapes	3 units
Stop Solution	1 x 11ml

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.

Involvement in disease Defects in APOA1 are a cause of high density lipoprotein deficiency type 2 (HDLD2) [MIM:604091]; also known as familial hypoalphalipoproteinemia (FHA). Inheritance is autosomal dominant.
Defects in APOA1 are a cause of the low HDL levels observed in high density lipoprotein deficiency type 1 (HDLD1) [MIM:205400]; also known as analphalipoproteinemia or Tangier disease (TGD). HDLD1 is a recessive disorder characterized by the absence of plasma HDL, accumulation of cholesteryl esters, premature coronary artery disease, hepatosplenomegaly, recurrent peripheral neuropathy and progressive muscle wasting and weakness. In HDLD1 patients, ApoA-I fails to associate with HDL probably because of the faulty conversion of pro-ApoA-I molecules into mature chains, either due to a defect in the converting enzyme activity or a specific structural defect in Tangier ApoA-I.
Defects in APOA1 are the cause of amyloid polyneuropathy-nephropathy Iowa type (AMYLIOWA) [MIM:107680]; also known as amyloidosis van Allen type or familial amyloid polyneuropathy type

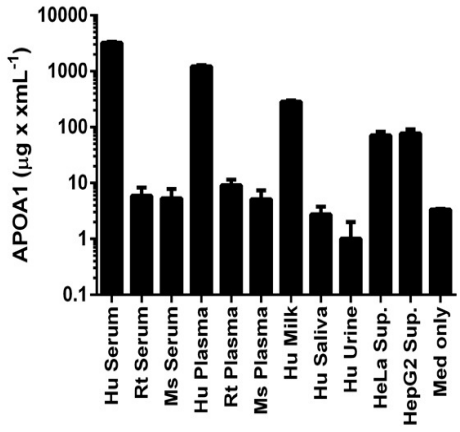
III. AMYLIOWA is a hereditary generalized amyloidosis due to deposition of amyloid mainly constituted by apolipoprotein A1. The clinical picture is dominated by neuropathy in the early stages of the disease and nephropathy late in the course. Death is due in most cases to renal amyloidosis. Severe peptic ulcer disease can occurr in some and hearing loss is frequent. Cataracts is present in several, but vitreous opacities are not observed.
Defects in APOA1 are a cause of amyloidosis type 8 (AMYL8) [MIM:105200]; also known as systemic non-neuropathic amyloidosis or Ostertag-type amyloidosis. AMYL8 is a hereditary generalized amyloidosis due to deposition of apolipoprotein A1, fibrinogen and lysozyme amyloids. Viscera are particularly affected. There is no involvement of the nervous system. Clinical features include renal amyloidosis resulting in nephrotic syndrome, arterial hypertension, hepatosplenomegaly, cholestasis, petechial skin rash.

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

Post-translational modifications Palmitoylated.
Phosphorylation sites are present in the extracelllular medium.

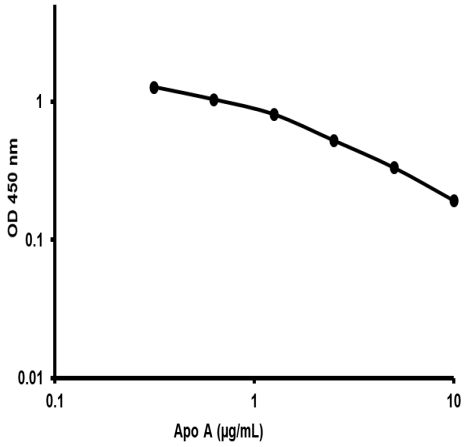
Cellular localization Secreted.

Images



Competitive ELISA - Apolipoprotein AI (APOA1) Human ELISA Kit (ab108804)

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



Typical Standard Curve

Representative Standard Curve using ab108804

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