abcam

Product datasheet

Mouse APOA1 ELISA Kit ab238260

Recombinant SimpleStep ELISA®

2 References 5 Images

Overview

Product name Mouse APOA1 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	3			4.7%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	8			5.6%

Sample type Cell culture supernatant, Serum, Hep Plasma, EDTA Plasma, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 11.22 pg/ml

Range 117.19 pg/ml - 9000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	91	81% - 101%
Serum	82	79% - 84%
Tissue Extracts	90	83% - 93%
Hep Plasma	92	88% - 96%
EDTA Plasma	88	85% - 90%
Cit plasma	99	91% - 101%

Assay time	1h 30m
Assay duration	One step assay
Species reactivity	**Reacts with:** Mouse
Product overview	Mouse APOA1 ELISA Kit (ab238260) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of APOA1 protein in cit plasma, edta plasma, hep plasma, serum, tissue extracts, and cell culture supernatant. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse APOA1 with 11.22 pg/ml sensitivity. SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits: - Single-wash protocol reduces assay time to 90 minutes or less - High sensitivity, specificity and reproducibility from superior antibodies - Fully validated in biological samples - 96-wells plate breakable into 12 x 8 wells strips A 384-well SimpleStep ELISA® microplate (ab203359) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.
Notes	Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances. It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.
Platform	Pre-coated microplate (12 x 8 well strips)

Properties

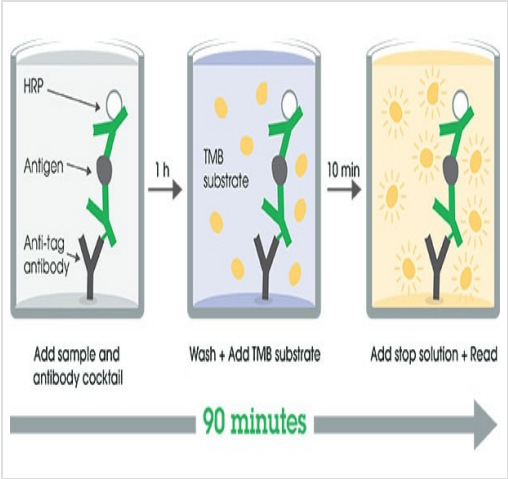
Storage instructions	Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Mouse APOA1 Capture Antibody	1 x 600µl
10X Mouse APOA1 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BC	1 x 6ml
Mouse APOA1 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml

Components	1 x 96 tests
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

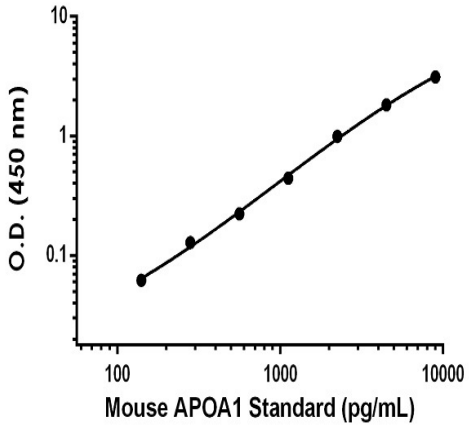
Function	Participates in the reverse transport of cholesterol from tissues to the liver for excretion by promoting cholesterol efflux from tissues and by acting as a cofactor for the lecithin cholesterol acyltransferase (LCAT). As part of the SPAP complex, activates spermatozoa motility.
Tissue specificity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



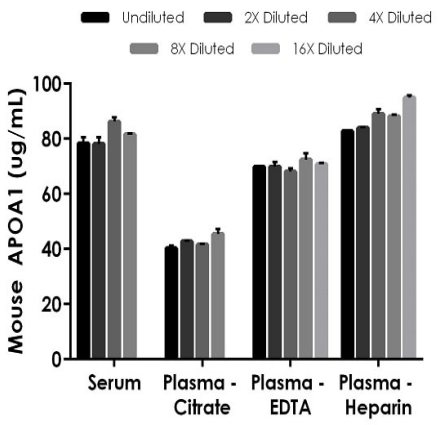
Other - Mouse APOA1 ELISA Kit (ab238260)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



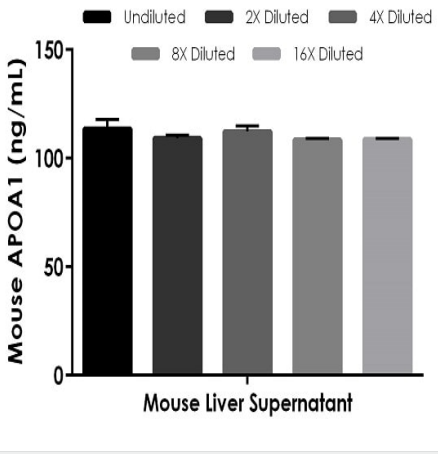
Example of mouse APOA1 standard curve in Sample Diluent NS.

The APOA1 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



Interpolated concentrations of native APOA1 in mouse serum and plasma samples.

The concentrations of APOA1 were measured in duplicates, interpolated from the APOA1 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1:50,000, plasma (citrate) 1:25,000, plasma (EDTA) 1:25,000, and plasma (heparin) 1:50,000. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean APOA1 concentration was determined to be 81.08 ug/mL in serum, 42.54 ug/mL in plasma (citrate), 70.10 ug/mL in plasma (EDTA), and 86.01 ug/mL in plasma (Heparin).



Interpolated concentrations of native APOA1 in mouse liver cell culture supernatant sample.

The concentrations of APOA1 were measured in duplicates, interpolated from the APOA1 standard curves and corrected for sample dilution. Undiluted sample was liver supernatant 5%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean APOA1 concentration was determined to be 110.43 ng/mL in liver supernatant.

Sandwich ELISA - Mouse APOA1 ELISA Kit (ab238260)

To learn more about the advantages of recombinant antibodies see here.

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