Datasheet for ABIN3044715

# APOA1 ELISA Kit

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## Overview

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| Quantity: | 96 tests |
| Target: | APOA1 |
| Binding Specificity: | AA 25-267 |
| Reactivity: | Human |
| Method Type: | Sandwich ELISA |
| Detection Range: | 3.12-200 ng/mL |
| Minimum Detection Limit: | 3.12 ng/mL |
| Application: | ELISA |

## Product Details

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| Purpose: | Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human APOA1 |
| Brand: | PicoKine™ |
| Sample Type: | Cell Culture Supernatant, Urine, Serum, Plasma (heparin), Plasma (EDTA) |
| Analytical Method: | Quantitative |
| Detection Method: | Colorimetric |
| Immunogen: | Immunogen sequence: D25-Q267 |
| Specificity: | Expression system for standard: E.coli<br>Immunogen sequence: D25-Q267 |
| Cross-Reactivity (Details): | There is no detectable cross-reactivity with other relevant proteins. |
| Sensitivity: | <50pg/mL |

## Product Details

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| Material not included: | Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl |

## Target Details

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| Target: | APOA1 |
| Alternative Name: | APOA1 (APOA1 Products) |
| Background: | Protein 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. .<br>Background: Apolipoprotein A1 is a protein that in humans is encoded by the APOA1 gene. This gene encodes apolipoprotein A-I, which is the major protein component of high density lipoprotein (HDL) in plasma. The encoded preproprotein is proteolytically processed to generate the mature protein, which promotes cholesterol efflux from tissues to the liver for excretion, and is a cofactor for lecithin cholesterolacyltransferase (LCAT), an enzyme responsible for the formation of most plasma cholesteryl esters. This gene is closely linked with two other apolipoprotein genes on chromosome 11. Defects in this gene are associated with HDL deficiencies, including Tangier disease, and with systemic non-neuropathic amyloidosis. Alternative splicing results in multiple transcript variants, at least one of which encodes a preproprotein.<br>Synonyms: Apolipoprotein A-I,Apo-AI,ApoA-I,Apolipoprotein A1,Proapolipoprotein A-I,ProapoA-I,Truncated apolipoprotein A-I,Apolipoprotein A-I(1-242),APOA1,<br>Full Gene Name: Apolipoprotein A-I<br>Cellular Localisation: Secreted. |
| Gene ID: | 335 |
| UniProt: | P02647 |
| Pathways: | Regulation of Lipid Metabolism by PPARalpha, Production of Molecular Mediator of Immune Response, Lipid Metabolism |

## Application Details

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| Application Notes: | Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well |

## Application Details

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| | assay was recommended for both standard and sample testing. |
| Comment: | 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. . |
| Plate: | Pre-coated |
| Protocol: | human APOA1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for APOA1 has been precoated onto 96-well plates. Standards(Expression system for standard: E.coli, mmunogen sequence: D25-Q267) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for APOA1 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human APOA1 amount of sample captured in plate. |
| Assay Procedure: | Aliquot 0.1 mL per well of the 200 ng/mL, 100 ng/mL, 50 ng/mL, 25 ng/mL, 12.5 ng/mL, 6.25 ng/mL, 3.12 ng/mL human APOA1 standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum, plasma(heparin, EDTA) or urine to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human APOA1 standard solution and each sample be measured in duplicate. |
| Restrictions: | For Research Use only |

## Handling

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| Buffer: | heparin or EDTA |
| Handling Advice: | Avoid multiple freeze-thaw cycles. |
| Storage: | 4 °C,-20 °C |
| Storage Comment: | Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles |
| Expiry Date: | 12 months |

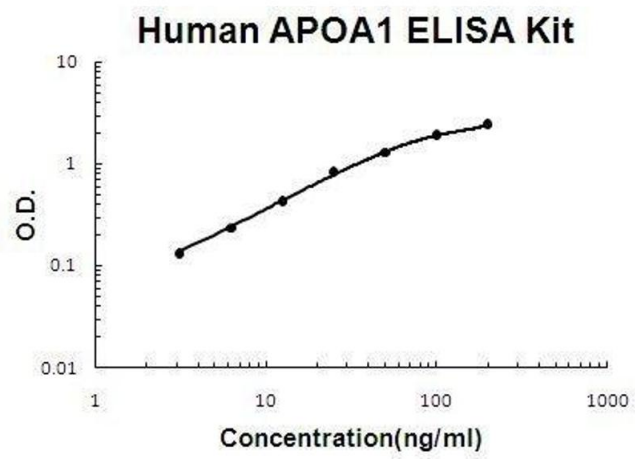
## Publications

Product cited in:

Ding, Luo, Yu, Zhou, Wu: "Vitreous levels of apolipoprotein A1 and retinol binding protein 4 in human rhegmatogenous retinal detachment associated with choroidal detachment." in: **Molecular vision**, Vol. 24, pp. 252-260, (2018) (PubMed).

Zhao, Li, Zhang, Gao, Pei, Wang, Guo, Yu, Zheng, Wang: "Detection of Serum Protein Biomarkers for the Diagnosis and Staging of Hepatoblastoma." in: **International journal of molecular sciences**, Vol. 16, Issue 6, pp. 12669-85, (2016) (PubMed).

## Images




**ELISA**

**Image 1.** Human APOA1 PicoKine ELISA Kit standard curve