# Anti-Apolipoprotein A I antibody ab7613

**Product name**  
Anti-Apolipoprotein A I antibody

**Description**  
Goat polyclonal to Apolipoprotein A I

**Host species**  
Goat

**Specificity**  
Typically less than 1% cross reactivity against other types of apoLipoprotein was detected by ELISA. This antibody reacts with human apoLipoprotein A-I and has negligible cross-reactivity with Type A-II, B, C-I, C-II, C-III, E and J apoLipoproteins.

**Tested applications**  
Suitable for: IHC-P, WB, ELISA, IP

**Species reactivity**  
Reacts with: Human

**Immunogen**  
Full length native apoLipoprotein Type A-I (purified).

**Positive control**  
IHC-P: normal human liver tissue.

**General notes**  
This antibody has been used to determine that atherosclerotic lesions in the human aorta contain considerable amounts of lipoproteins. These lipoproteins were observed to be complexed with components of the extracellular matrix (especially LDL and proteoglycans). The role of these matrix-lipoprotein complexes is not entirely clear, however, animal models of atherosclerosis have shown that increased cellular proliferation and increased production of extracellular matrix components occur following injury to the intimal layer of the aorta.

## Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
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<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
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<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.</td>
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</table>
| **Storage buffer**        | pH: 7.20  
Preservative: 0.01% Sodium azide  
Constituents: 0.44% Sodium chloride, 4.77% Sodium borate, 0.15% EDTA |
| **Purity**                | Immunogen affinity purified |
| **Purification notes**    | This product has been prepared by immunoaffinity chromatography using immobilized antigens followed by extensive cross-adsorption against other apoLipoproteins and human serum proteins to remove any unwanted specificities. |
| **Clonality**             | Polyclonal |
| **Isotype**               | IgG     |
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 occur 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.

Applications

Our Abpromise guarantee covers the use of ab7613 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>
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<tr>
<td>IHC-P</td>
<td></td>
<td>Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.</td>
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<tr>
<td>WB</td>
<td>5/5/5/5/5</td>
<td>1/5000 - 1/10000.</td>
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<tr>
<td>ELISA</td>
<td></td>
<td>1/4000 - 1/8000. Can be paired with ab20784 for sandwich ELISA.</td>
</tr>
<tr>
<td>IP</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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</table>
Sequence similarities
Belongs to the apolipoprotein A1/A4/E family.

Post-translational modifications
Palmitoylated.

Phosphorylation sites are present in the extracellular medium.

Cellular localization
Secreted.

Images

IHC image of Apolipoprotein A I staining in human normal liver formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol B. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab7613, 1µg/ml, for 15 mins at room temperature. A donkey anti-goat biotinylated secondary antibody was used to detect the primary, and visualized using an HRP conjugated ABC system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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