Anti-Apolipoprotein A I antibody ab64308

Overview

Product name: Anti-Apolipoprotein A I antibody
Description: Rabbit polyclonal to Apolipoprotein A I
Host species: Rabbit
Tested applications: Suitable for: Sandwich ELISA, WB, ICC/IF
Species reactivity: Reacts with: Human
Predicted to work with: Dog, Pig, Baboon
Immunogen: Synthetic peptide conjugated to KLH derived from within residues 200 to the C-terminus of Human Apolipoprotein A I. Read Abcam's proprietary immunogen policy (Peptide available as ab66674.)
Positive control: Recombinant Human Apolipoprotein A I (ab50239) can be used as a positive control in WB. This antibody gave a positive signal in the following Human Tissue Lysates: Testis, Ovary, Lung, Thymus

Properties

Form: Liquid
Storage instructions: 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.
Storage buffer: Preservative: 0.02% Sodium Azide
Constituents: 1% BSA, PBS, pH 7.4
Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab64308 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
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<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Sandwich ELISA</td>
<td>Use a concentration of 0.5 µg/ml. For sandwich ELISA, use this antibody as Detection at 0.5µg/ml with ab20918 as Capture.</td>
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<tr>
<td>WB</td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 27 kDa (predicted molecular weight: 31 kDa).</td>
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<tr>
<td>ICC/IF</td>
<td>Use a concentration of 1 - 5 µg/ml.</td>
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**Target**

**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 hypalphalipoproteinemia (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 (AMYL1OWA) [MIM:107680]; also known as amyloidosis van Allen type or familial amyloid polyneuropathy type III. AMYL1OWA 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.

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

**Post-translational modifications**
Palmitoylated.

**Cellular localization**
Secreted.
All lanes: Anti-Apolipoprotein A I antibody (ab64308) at 1 µg/ml

Lane 1: Human testis tissue lysate - total protein (ab30257)
Lane 2: Human ovary tissue lysate - total protein (ab30222)
Lane 3: Lung (Human) Tissue Lysate - adult normal tissue
Lane 4: Human thymus tissue lysate - total protein (ab30146)

Lysates/proteins at 10 µg per lane.

Secondary

All lanes: Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 31 kDa
Observed band size: 27 kDa

why is the actual band size different from the predicted?

Standard Curve for Apolipoprotein A I (Analyte: ab50239) dilution range 1pg/ml to 1ug/ml using Capture Antibody Mouse monoclonal [1409] to Apolipoprotein A I (ab20918) at 1ug/ml and Detector Antibody Rabbit polyclonal to Apolipoprotein A I (ab64308) at 0.5ug/ml

ICC/IF image of ab64308 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal Goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab64308, 5ug/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 Goat anti-Rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue). This antibody also gave a positive result in 4% PFA fixed (10 min) Hek293, HepG2, and MCF-7 cells
at 5µg/ml.

ab64308 staining ApoA1 in HepG1 cells treated with nicotinic acid (ab120145), by ICC/IF. Decrease in ApoA1 expression correlates with increased concentration of nicotinic acid, as described in literature.

The cells were incubated at 37øC for 72h in media containing different concentrations of ab120145 (nicotinic acid) in DMSO, fixed with 4% formaldehyde for 10 minutes at room temperature and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 2h at room temperature. Staining of the treated cells with ab64308 (5 µg/ml) was performed overnight at 4øC in PBS containing 1% BSA and 0.1% tween. A DyLight 488 goat anti-rabbit polyclonal antibody (ab96899) at 1/250 dilution was used as the secondary antibody.

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