Datasheet for ABIN5596808

anti-APOA1 antibody

8 Images | 10 Publications

Go to Product page

Overview

Quantity:	1 mg
Target:	APOA1
Reactivity:	Mouse
Host:	Goat
Clonality:	Polyclonal
Conjugate:	This APOA1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP)

Product Details

Purpose:	Apolipoprotein A-I Antibody
Immunogen:	Immunogen: apoLipoprotein Type A-I was isolated from mouse plasma by density gradient centrifugation followed by HPLC purification. Immunogen Type: Native Protein
Isotype:	IgG
Cross-Reactivity (Details):	Typically less than 1 % cross-reactivity against other types of apoLipoprotein was detected by ELISA against purified standards.
Characteristics:	Synonyms: goat anti-Apolipoprotein A-I Antibody, goat anti-APOA1 antibody, goat anti-APO-A1 antibody, goat anti-APOA-1 antibody, APOA1/APOC3 fusion gene antibody, Apolipoprotein A I precursor antibody, Apolipoprotein AI antibody, Apolipoprotein of high density lipoprotein antibody, ProapoA-I, Proapolipoprotein A-I
Purification:	This product has been prepared by immunoaffinity chromatography using immobilized

Product Details

	antigens followed by extensive cross-adsorption against other apoLipoproteins and human serum proteins to remove any unwanted specificities.
Sterility:	Sterile filtered

Target Details

Target:	APOA1
Alternative Name:	Apoa1 (APOA1 Products)
Background:	Background: Anti Apolipoprotein A-I antibody recognizes the gene product of APOA1. Apolipoprotein promotes cholesterol efflux from tissues to the liver for excretion. Apolipoprotein A-I is the major protein component of high density lipoprotein (HDL) in the plasma. Synthesized in the liver and small intestine, it consists of two identical chains of 77 amino acids, an 18-amino acid signal peptide is removed co-translationally and a 6-amino acid propeptide is cleaved post-translationally. Variation in the latter step, in addition to modifications leading to so-called isoforms, is responsible for some of the polymorphism observed. APOA1 is a cofactor for lecithin cholesterolacyltransferase (LCAT) which is responsible for the formation of most plasma cholesteryl esters. The APOA1, APOC3 and APOA4 genes are closely linked in both rat and human genomes. The A-I and A-IV genes are transcribed from the same strand, while the C-III gene is transcribed convergently in relation to A-I. Defects in the apolipoprotein A-1 gene are associated with HDL deficiency and Tangier disease. This antibody is suitable for cardiovascular research.
Gene ID:	11806
NCBI Accession:	NP_033822
UniProt:	Q00623
Pathways:	Regulation of Lipid Metabolism by PPARalpha, Production of Molecular Mediator of Immune Response, Lipid Metabolism

Application Details

Application Notes:	Immunohistochemistry Dilution: 1:250 - 1:500 Application Note: Anti-apoLipoprotein antibodies have been used for indirect trapping ELISA for quantitation of antigen in serum using a standard curve, for immunoprecipitation and for western blotting for highly sensitive qualitative analysis. Western Blot Dilution: 1:500 - 1:1,000

Application Details

	Immunoprecipitation Dilution: 1:100 ELISA Dilution: 1:5,000 - 1:10,000 Other: User Optimized
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	Buffer: 0.125 M Sodium Borate, 0.075 M Sodium Chloride, 0.005 M EDTA, pH 8.0 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at 4° C prior to opening. This product is stable at 4° C as an undiluted liquid. Dilute only prior to immediate use. For extended storage, mix with an equal volume of glycerol, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing.
Expiry Date:	12 months

Publications

Product cited in:	Han, Tang, Guevara, Wei, Wietecha, Shao, Subramanian, Omer, Wang, OBrien, Marcovina, Wight, Vaisar, de Beer, de Beer, Osborne, Elkon, Chait: "Serum amyloid A impairs the antiinflammatory properties of HDL." in: **The Journal of clinical investigation**, Vol. 126, Issue 1, pp. 266-81, (2016) (PubMed). Tóth, Szegedi, Varga, Juhász, Horváth, Borbély, Csibrány, Alföldi, Lénárt, Penke, Sántha: " Overexpression of Hsp27 ameliorates symptoms of Alzheimer's disease in APP/PS1 mice." in: **Cell stress & chaperones**, Vol. 18, Issue 6, pp. 759-71, (2014) (PubMed). Fitz, Cronican, Saleem, Fauq, Chapman, Lefterov, Koldamova: "Abca1 deficiency affects Alzheimer's disease-like phenotype in human ApoE4 but not in ApoE3-targeted replacement

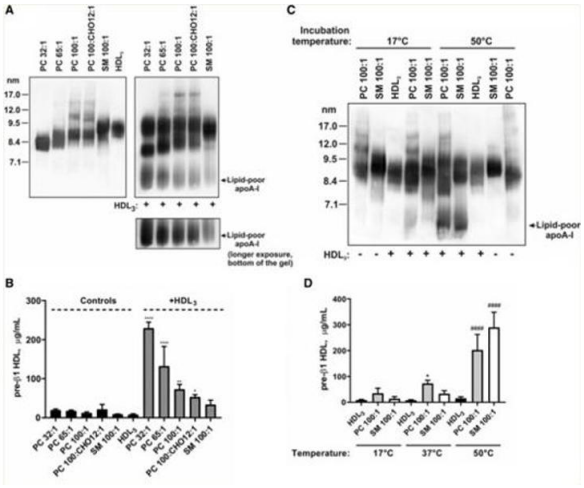
mice." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 32, Issue 38, pp. 13125-36, (2012) (PubMed).

Tadin-Strapps, Peterson, Cumiskey, Rosa, Mendoza, Castro-Perez, Puig, Zhang, Strapps, Yendluri, Andrews, Pickering, Rice, Luo, Chen, Tep, Ason, Somers, Sachs, Bartz, Tian, Chin, Hubbard, Wong, Mitnaul: "siRNA-induced liver ApoB knockdown lowers serum LDL-cholesterol in a mouse model with human-like serum lipids." in: **Journal of lipid research**, Vol. 52, Issue 6, pp. 1084-97, (2011) (PubMed).

Champy, Le Voci, Selloum, Peterson, Cumiskey, Blom: "Reduced body weight in male Tspan8-deficient mice." in: **International journal of obesity (2005)**, Vol. 35, Issue 4, pp. 605-17, (2011) (PubMed).

There are more publications referencing this product on: Product page

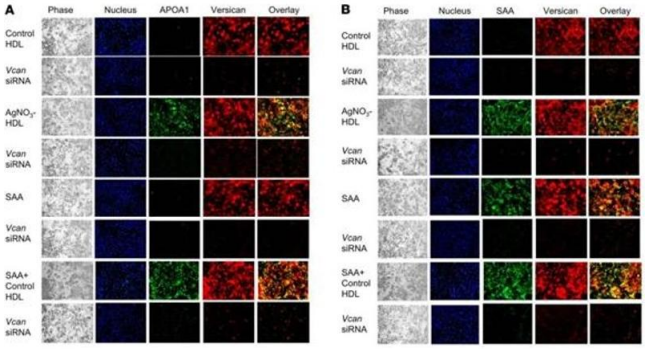
Images



Western Blotting

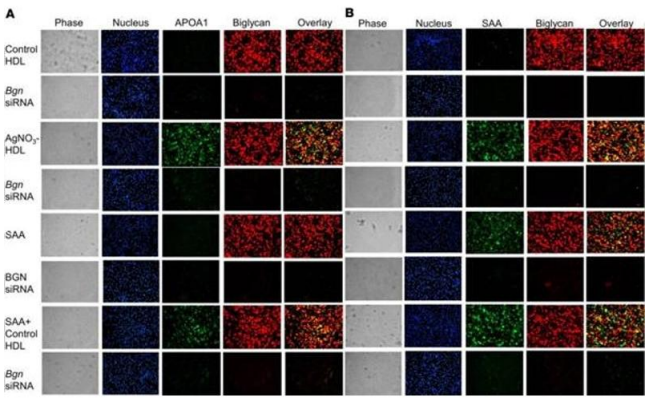
Image 1. Western Blot of Anti-Apolipoprotein AI. Phospholipid:protein ratio and lipid composition of discoidal HDLs (high-density lipoproteins) impact on interaction with HDL3 and apo AI (apolipoprotein AI) release. HDL3 (final protein concentration 1 mg/mL) was incubated for 1 h with different formulations of reconstituted HDL (final protein concentration 1 mg/mL) as indicated. Lipid-poor apo AI was analyzed either by Western blotting with anti-apo AI antibody following separation of lipoproteins by nondenaturing polyacrylamide gradient gel electrophoresis (A and C) or by pre-β1 HDL ELISA (B and D). Lipoproteins incubated alone in PBS were included as controls. A and B, Incubation at 37 °C. C, Incubation at 17 °C and 50 °C. D, Shown data for incubations of HDL3 with phosphatidylcholine (PC) 100:1 apo AI (gray bars) and sphingomyelin (SM) 100:1 apo AI (white bars) at 17 °C, 37 °C and 50 °C. B and D, Data from three independent

experiments are shown. Values are presented as mean±SD. B, Pre-β1: ****P<0.0001, ***P<0.001, **P<0.01, *P<0.05 vs HDL3. D, Pre-β1: ####P<0.0001 and *P<0.05 vs HDL3, for incubations at 50 °C and 37 °C, respectively. Figure 7. PMID: 32131613.



Fluorescence Microscopy

Image 2. Immunofluorescence of Anti-Apolipoprotein AI. Versican colocalizes with HDL isolated from AgNO3-injected mice at the cell surface of 3T3-L1 adipocytes. Free SAA and HDL from PBS- or AgNO3-injected C57BL/6 mice were isolated. Some adipocytes were transfected with siRNA specific for versican (Vcan) for 3 days. After exposure to free SAA (15 µg/mL) and/or these HDL preparations (50 µg protein/mL) for 6 hours, 3T3-L1 adipocytes were fixed in 2 % formalin for 5 minutes. After extensively washing, (A) APOA1 and versican were stained using anti-versican (shown in red) and anti-APOA1 (shown in green) antibodies, or (B) SAA and versican were stained using anti-versican (shown in red) and anti-SAA (shown in green) antibodies and photographed by fluorescence microscopy (Nikon Eclipse 80i, original magnification, x200). Cell nuclei were counterstained with DAPI (blue). Cell morphology was shown by phase-contrast photography (left). Merged fluorescence (overlay) is shown in yellow. Figure 2. PMID: 32970631.



Fluorescence Microscopy

Image 3. Immunofluorescence of Anti-Apolipoprotein AI. HDL isolated from AgNO3-injected mice colocalizes with biglycan at the cell surface of peritoneal macrophages. HDL from PBS- and AgNO3-injected C57BL/6 mice was isolated. After exposure to these HDL preparations (50 µg protein/mL) for 6 hours, TG-elicited peritoneal macrophages from Saa3-/- were fixed in 2 % formalin for 5 minutes (A and B). After extensive washing, (A) APOA1 and biglycan

were stained using anti-biglycan (red) and anti-APOA1 (green) antibodies, or (B) SAA and biglycan were stained using anti-biglycan (red) and ant-SAA (green) antibodies and photographed by fluorescence microscopy (Nikon Eclipse 80i, original magnification, x200). Figure 5. PMID: 32970631.

Please check the product details page for more images. Overall 8 images are available for ABIN5596808.