

Anti-Apolipoprotein E antibody [EP1374Y] ab52607

KO 評価済 リコンビナント RabMAb

★★★★☆ 3 Abreviews 35 References 画像数 9

製品の概要

製品名	Anti-Apolipoprotein E antibody [EP1374Y]
製品の詳細	Rabbit monoclonal [EP1374Y] to Apolipoprotein E
由来種	Rabbit
アプリケーション	適用あり: Flow Cyt (Intra), WB, IP, IHC-P, ICC/IF
種交差性	交差種: Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: HEK293 and HepG2 cell lysate, Human liver, cerebellum and serum lysate; Flow Cyt (intra): HepG2 cells; IP: HepG2 whole cell lysate and Human serum; ICC/IF: HepG2 cell lysate; IHC: Astrocytoma tissue.
特記事項	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
バッファー	<p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 40% Glycerol (glycerin, glycerine), 59% PBS, 0.05% BSA</p>
精製度	Protein A purified
ポリ/モノ	モノクローナル

クローン名 EP1374Y
アイソタイプ IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab52607の使用に適用されます**
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご確認ください。

アプリケーション	Abreviews	特記事項
Flow Cyt (Intra)		1/20.
WB	★★★★★ (1)	1/1000 - 1/10000. Detects a band of approximately 36 kDa (predicted molecular weight: 36 kDa).
IP		1/20.
IHC-P		1/800. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF	★★★★★ (1)	1/50.

ターゲット情報

機能	Mediates the binding, internalization, and catabolism of lipoprotein particles. It can serve as a ligand for the LDL (apo B/E) receptor and for the specific apo-E receptor (chylomicron remnant) of hepatic tissues.
組織特異性	Occurs in all lipoprotein fractions in plasma. It constitutes 10-20% of very low density lipoproteins (VLDL) and 1-2% of high density lipoproteins (HDL). APOE is produced in most organs. Significant quantities are produced in liver, brain, spleen, lung, adrenal, ovary, kidney and muscle.
関連疾患	<p>Defects in APOE are a cause of hyperlipoproteinemia type 3 (HLPP3) [MIM:107741]; also known as familial dysbetalipoproteinemia. Individuals with HLPP3 are clinically characterized by xanthomas, yellowish lipid deposits in the palmar crease, or less specific on tendons and on elbows. The disorder rarely manifests before the third decade in men. In women, it is usually expressed only after the menopause. The vast majority of the patients are homozygous for APOE*2 alleles. More severe cases of HLPP3 have also been observed in individuals heterozygous for rare APOE variants. The influence of APOE on lipid levels is often suggested to have major implications for the risk of coronary artery disease (CAD). Individuals carrying the common APOE*4 variant are at higher risk of CAD.</p> <p>Genetic variations in APOE are associated with Alzheimer disease type 2 (AD2) [MIM:104310]. It is a late-onset neurodegenerative disorder characterized by progressive dementia, loss of cognitive abilities, and deposition of fibrillar amyloid proteins as intraneuronal neurofibrillary tangles, extracellular amyloid plaques and vascular amyloid deposits. The major constituent of these plaques is the neurotoxic amyloid-beta-APP 40-42 peptide (s), derived proteolytically from the transmembrane precursor protein APP by sequential secretase processing. The cytotoxic C-terminal fragments (CTFs) and the caspase-cleaved products such as C31 derived from APP, are also implicated in neuronal death. Note=The APOE*4 allele is genetically associated with the common late onset familial and sporadic forms of Alzheimer disease. Risk for AD increased from 20% to 90% and mean age at onset decreased from 84 to 68 years with increasing number of</p>

APOE*4 alleles in 42 families with late onset AD. Thus APOE*4 gene dose is a major risk factor for late onset AD and, in these families, homozygosity for APOE*4 was virtually sufficient to cause AD by age 80. The mechanism by which APOE*4 participates in pathogenesis is not known. Defects in APOE are a cause of sea-blue histiocyte disease (SBHD) [MIM:269600]; also known as sea-blue histiocytosis. This disorder is characterized by splenomegaly, mild thrombocytopenia and, in the bone marrow, numerous histiocytes containing cytoplasmic granules which stain bright blue with the usual hematologic stains. The syndrome is the consequence of an inherited metabolic defect analogous to Gaucher disease and other sphingolipidoses. Defects in APOE are a cause of lipoprotein glomerulopathy (LPG) [MIM:611771]. LPG is an uncommon kidney disease characterized by proteinuria, progressive kidney failure, and distinctive lipoprotein thrombi in glomerular capillaries. It mainly affects people of Japanese and Chinese origin. The disorder has rarely been described in Caucasians.

配列類似性

Belongs to the apolipoprotein A1/A4/E family.

翻訳後修飾

Synthesized with the sialic acid attached by O-glycosidic linkage and is subsequently desialylated in plasma. O-glycosylated with core 1 or possibly core 8 glycans. Thr-307 is a minor glycosylation site compared to Ser-308.

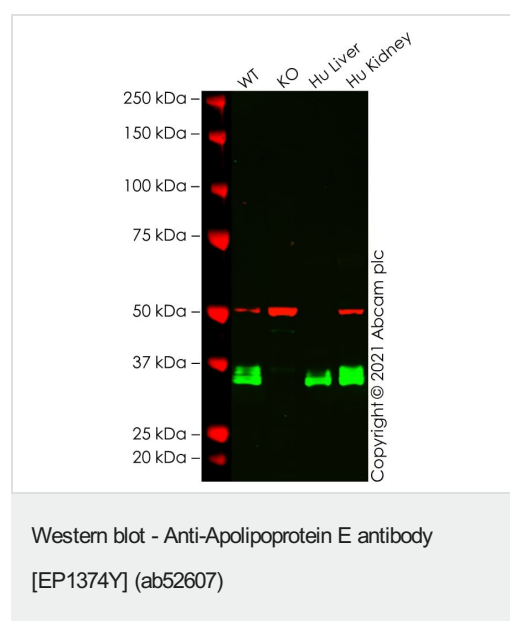
Glycated in plasma VLDL of normal subjects, and of hyperglycemic diabetic patients at a higher level (2-3 fold).

Phosphorylation sites are present in the extracellular medium.

細胞内局在

Secreted.

画像



All lanes : Anti-Apolipoprotein E antibody [EP1374Y] (ab52607) at 1/1000 dilution

Lane 1 : Wild-type HepG2 cell lysate

Lane 2 : APOE knockout HepG2 cell lysate

Lane 3 : Human Liver cell lysate

Lane 4 : Human Kidney cell lysate

Lysates/proteins at 20 µg per lane.

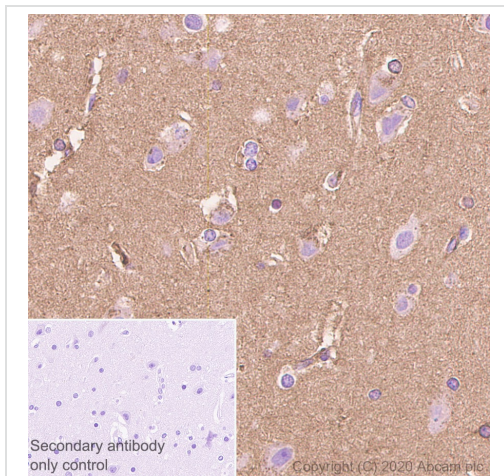
Performed under reducing conditions.

Predicted band size: 36 kDa

Observed band size: 34 kDa

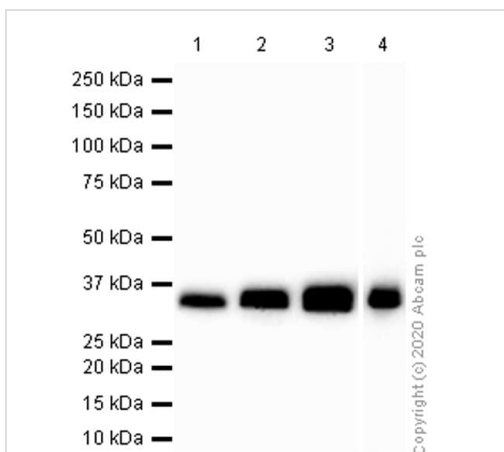
False colour image of Western blot: Anti-Apolipoprotein E antibody [EP1374Y] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab52607 was shown to bind specifically to Apolipoprotein E. A band was observed at 34-37

kDa in wild-type HepG2 cell lysates with no signal observed at this size in APOE knockout cell line. To generate this image, wild-type and APOE knockout HepG2 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5 % milk in TBS-0.1 % Tween[®] 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye[®] 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye[®] 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human astrocytoma tissue sections labeling Apolipoprotein E with purified ab52607 at 1/800 dilution (0.13 µg/mL). Heat mediated antigen retrieval using Bond[™] Epitope Retrieval Solution 2 (pH 9.0). The immunostaining was performed on a Leica Biosystems BOND[®] RX instrument. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Apolipoprotein E antibody [EP1374Y] (ab52607)



Western blot - Anti-Apolipoprotein E antibody [EP1374Y] (ab52607)

All lanes : Anti-Apolipoprotein E antibody [EP1374Y] (ab52607) at 1/10000 dilution (Purified)

Lane 1 : Human liver lysate at 20 µg

Lane 2 : Human cerebellum lysate at 20 µg

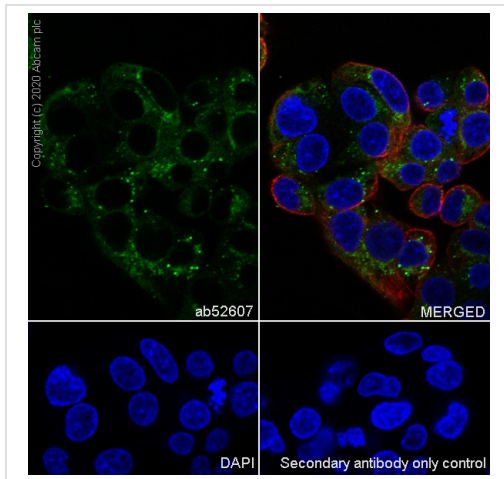
Lane 3 : HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4 : Human serum lysate at 15 µg

Secondary

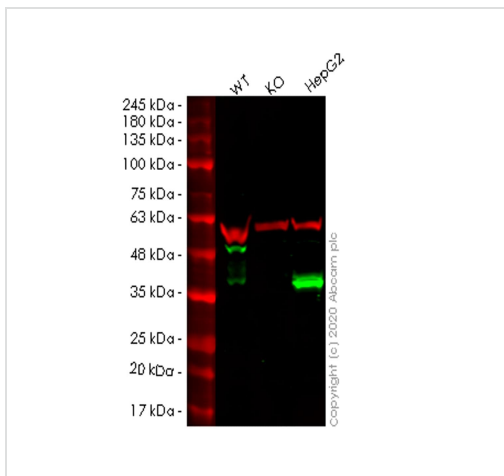
All lanes : Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 36 kDa



Immunocytochemistry/ Immunofluorescence - Anti-Apolipoprotein E antibody [EP1374Y] (ab52607)

Immunocytochemistry analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling Apolipoprotein E with Purified ab52607 at 1:50 dilution (2.0 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Western blot - Anti-Apolipoprotein E antibody [EP1374Y] (ab52607)

All lanes : Anti-Apolipoprotein E antibody [EP1374Y] (ab52607) at 1/1000 dilution (Unpurified)

Lane 1 : Wild-type HEK293T cell lysate

Lane 2 : APOE knockout HEK293T cell lysate

Lane 3 : HepG2 cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) at 1/10000 dilution

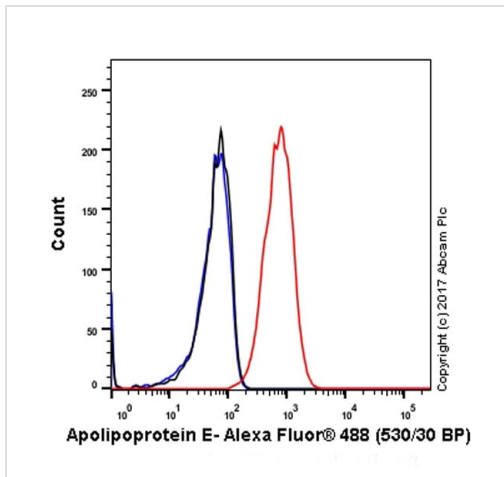
Predicted band size: 36 kDa

Observed band size: 36 kDa

Lanes 1-3: Merged signal (red and green). Green - ab52607 observed at 36 kDa. Red - loading control [ab7291](#) observed at 50 kDa.

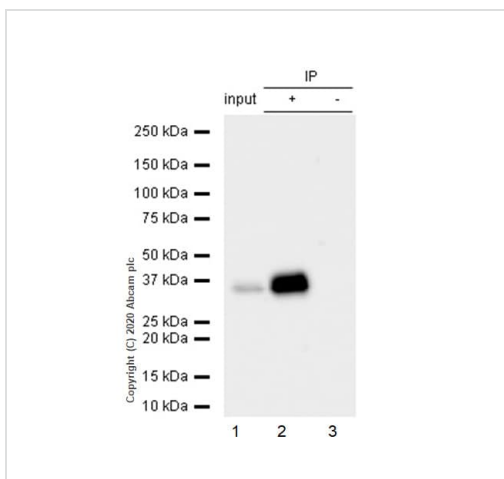
ab52607 Anti-Apolipoprotein E antibody [EP1374Y] was shown to specifically react with Apolipoprotein E in wild-type HEK293T cells. Loss of signal was observed when knockout cell line [ab266546](#) (knockout cell lysate [ab256838](#)) was used. Wild-type and Apolipoprotein E knockout samples were subjected to SDS-PAGE. ab52607 and Anti-alpha Tubulin antibody [DM1A] - Loading Control ([ab7291](#)) were incubated at room temperature for 2.5 hours at 1 in 1000 dilution and 1 in 20000 dilution respectively.

Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



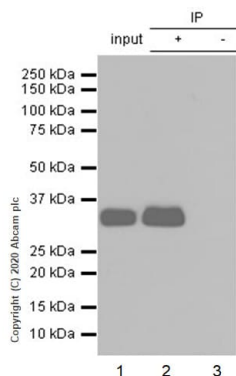
Flow Cytometry (Intracellular) - Anti-Apolipoprotein E antibody [EP1374Y] ([ab52607](#))

Intracellular Flow Cytometry analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling Apolipoprotein E (red) with purified [ab52607](#) (Unpurified) at a 1/250 dilution (10ug/mL). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti rabbit IgG (Alexa Fluor® 488) ([ab150077](#)) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (Black) ([ab172730](#)). Blue (unlabeled control) - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunoprecipitation - Anti-Apolipoprotein E antibody [EP1374Y] ([ab52607](#))

Purified [ab52607](#) at 1/20 dilution (0.5µg) immunoprecipitating Apolipoprotein E in HepG2 whole cell lysate.
 Lane 1 (input): HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysate 10µg
 Lane 2 (+): [ab52607](#) + HepG2 whole cell lysate.
 Lane 3 (-): Rabbit monoclonal IgG ([ab172730](#)) instead of [ab52607](#) in HepG2 whole cell lysate.
 VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) (1/5000 dilution) was used for Western blotting.
 Blocking Buffer and concentration: 5% NFDm/TBST.
 Diluting buffer and concentration: 5% NFDm/TBST.
 Observed band size: 36 kDa



Immunoprecipitation - Anti-Apolipoprotein E antibody
[EP1374Y] (ab52607)

Purified ab52607 at 1/20 dilution (0.5µg) immunoprecipitating
Apolipoprotein E in Human serum.

Lane 1 (input): Human serum 10µg

Lane 2 (+): ab52607 + Human serum.

Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab52607
in Human serum.

VeriBlot for IP Detection Reagent (HRP) (**ab131366**) (1/1000
dilution) was used for Western blotting.

Blocking Buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM/TBST.

Observed band size: 36 kDa

Why choose a recombinant antibody?



**Research with
confidence**
Consistent and
reproducible results



**Long-term and
scalable supply**
Recombinant
technology



**Success from the
first experiment**
Confirmed
specificity



**Ethical standards
compliant**
Animal-free
production

Anti-Apolipoprotein E antibody [EP1374Y] (ab52607)

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