abcam

Product datasheet

Anti-Apolipoprotein E antibody [EPR19392] ab183597

敲除验证 重组 RabMAb

17 References 14 图像

概述

产品名称	Anti-Apolipoprotein E抗体[EPR19392]
描述	兔单克隆抗体[EPR19392] to Apolipoprotein E
宿主	Rabbit
经测试应用	**适用于:** Flow Cyt (Intra), IP, ICC/IF, IHC-P, WB
种属反应性	**与反应:** Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: Human fetal liver and fetal kidney lysates; Rat and mouse liver lysates; HepG2 whole cell lysate; Human, mouse and rat plasma; Mouse brain and heart lysates; Rat brain and kidney lysates. IHC-P: Mouse liver and thalamus tissues; Rat liver and cerebral cortex tissues; Human liver and tonsil tissues. ICC/IF: HepG2 cells. Flow Cyt (intra): HepG2 cells. IP: Mouse plasma.
常规说明	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
存储溶液	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR19392

同种型 IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用**ab183597**于以下的**经测试应用

"应用说明"**部分 下显示的**仅为**推荐的起始稀释度**;实际**最佳的稀释度**/浓**度**应**由使用者检定。**

应用	Ab评论	说明
Flow Cyt (Intra)		1/70. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
IP		1/40.
ICC/IF		1/500.
IHC-P		1/2000 - 1/4000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/2000. Detects a band of approximately 36 kDa (predicted molecular weight: 36 kDa).

靶标

功能 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.

组织特异性 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.

疾病相关 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.
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

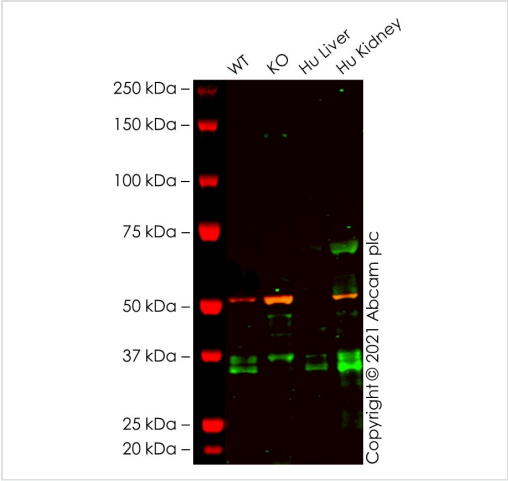
common late onset familial and sporadic forms of Alzheimer disease. Risk for AD increased from 20% to 90% and mean age at onset decreased from 84 to 68 years with increasing number of APOE*4 alleles in 42 families with late onset AD. Thus APOE*4 gene dose is a major risk factor for late onset AD and, 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.

序列相似性 Belongs to the apolipoprotein A1/A4/E family.

翻译后修饰 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 extracelllular medium.

细胞定位 Secreted.

图片



Western blot - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

All lanes : Anti-Apolipoprotein E antibody [EPR19392] (ab183597) at 1/2000 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

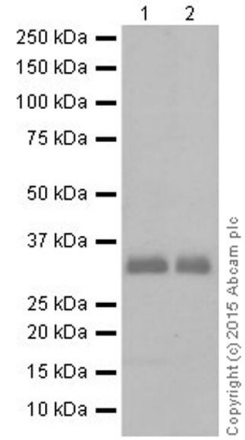
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 36 kDa
Observed band size: 34 kDa

False colour image of Western blot: Anti-Apolipoprotein E antibody [EPR19392] staining at 1/2000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (**ab7291**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab183597 was

shown to bind specifically to Apolipoprotein E. A band was observed at 34 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.



Western blot - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

All lanes : Anti-Apolipoprotein E antibody [EPR19392] (ab183597) at 1/2000 dilution

Lane 1 : Human fetal liver lysate
Lane 2 : Human fetal kidney lysate

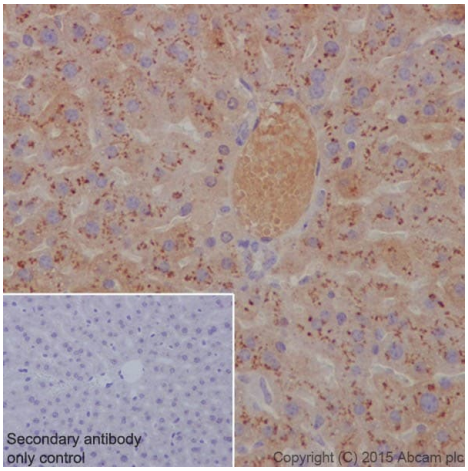
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 36 kDa
Observed band size: 36 kDa

Exposure time: 30 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

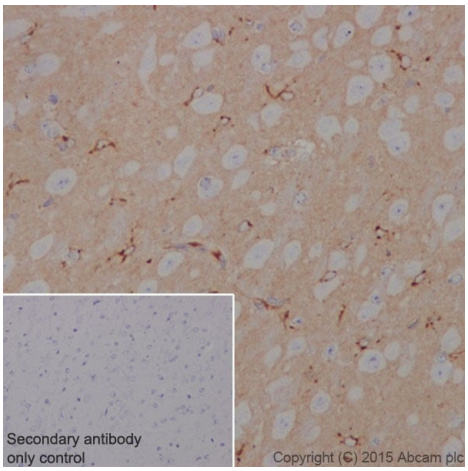


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Apolipoprotein E with ab183597 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasm staining on hepatocytes of mouse liver, and plasma was also stained. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

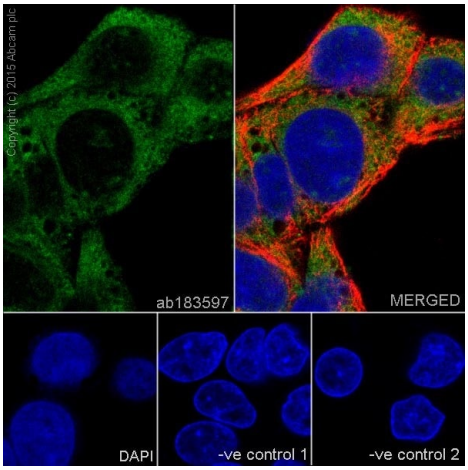


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

Immunohistochemical analysis of paraffin-embedded Mouse thalamus tissue labeling Apolipoprotein E with ab183597 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasm staining on astrocytes of mouse thalamus is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

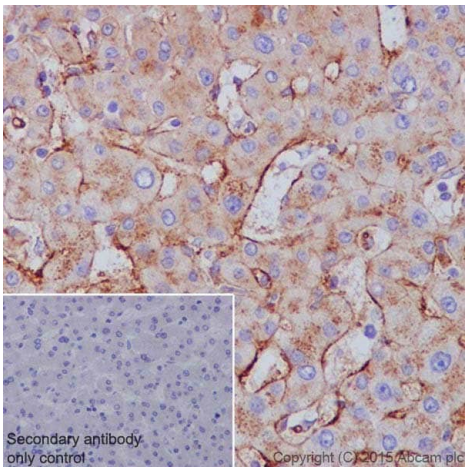
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

Immunofluorescent analysis of 100% methanol-fixed HepG2 (Human liver hepatocellular carcinoma cell line) cells labeling Apolipoprotein E with ab183597 at 1/500 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HepG2 cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody - Loading Control (**ab7291**) at 1/1000 dilution and Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (**ab150120**) at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab183597 at 1/500 dilution followed by **ab150120** at 1/1000 dilution.
-ve control 2: **ab7291** at 1/1000 dilution followed by **ab150077** at 1/1000 dilution.

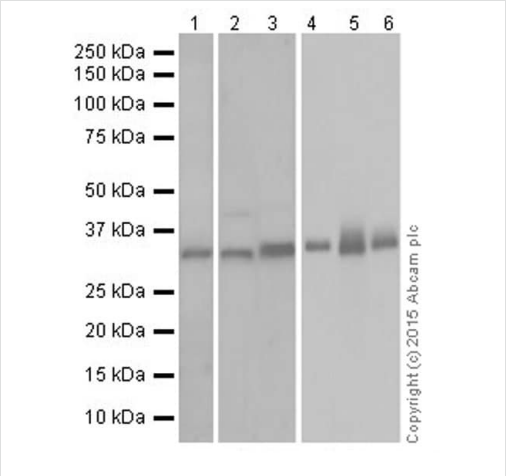


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Apolipoprotein E with ab183597 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasm staining on hepatocytes of Human liver is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

All lanes : Anti-Apolipoprotein E antibody [EPR19392] (ab183597) at 1/2000 dilution

Lane 1 : Rat liver lysate
Lane 2 : Mouse liver lysate
Lane 3 : HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate
Lane 4 : Human plasma
Lane 5 : Mouse plasma
Lane 6 : Rat plasma

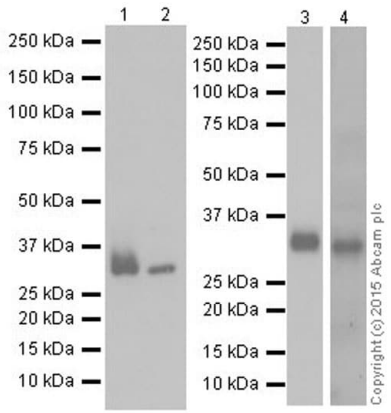
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 36 kDa
Observed band size: 36 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1: 3 minutes; Lane 2 and 3: 30 seconds; Lane 4, 5 and 6: 5 seconds.



Western blot - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

All lanes : Anti-Apolipoprotein E antibody [EPR19392] (ab183597) at 1/2000 dilution

Lane 1 : Mouse brain lysate
Lane 2 : Mouse heart lysate
Lane 3 : Rat brain lysate
Lane 4 : Rat kidney lysate

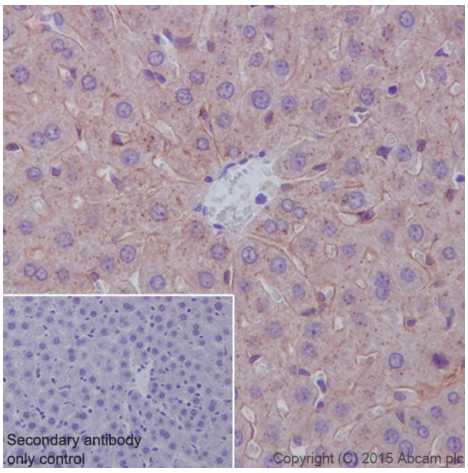
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 36 kDa
Observed band size: 36 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1 and 2: 5 seconds; Lane 3: 10 seconds; Lane 4: 30 seconds.

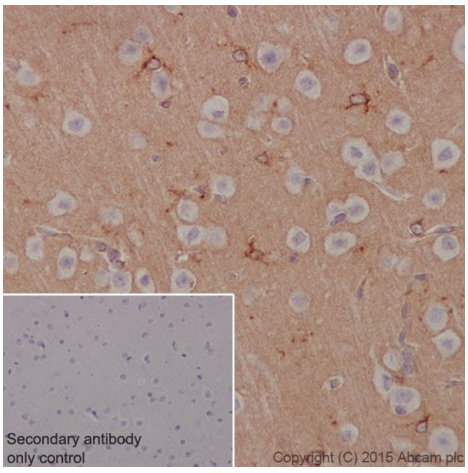


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling Apolipoprotein E with ab183597 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasm staining on hepatocytes of rat liver is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

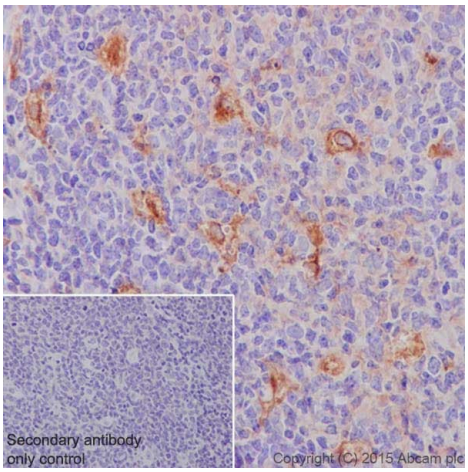


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

Immunohistochemical analysis of paraffin-embedded Rat cerebral cortex tissue labeling Apolipoprotein E with ab183597 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasm staining on astrocytes of rat cerebral cortex is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

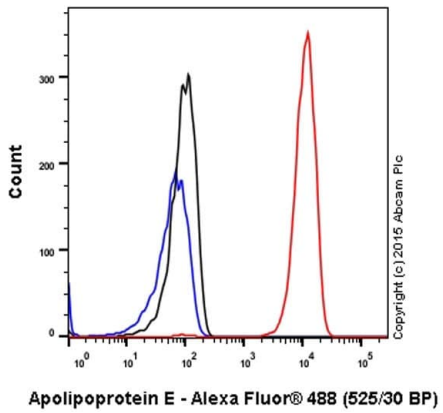


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling Apolipoprotein E with ab183597 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasm staining on macrophages of Human tonsil is observed. Counter stained with Hematoxylin.

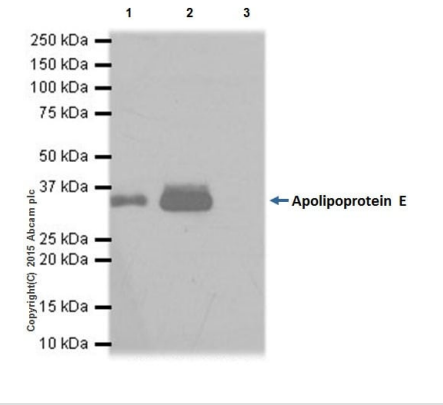
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HepG2 (Human liver hepatocellular carcinoma cell line) cells labeling Apolipoprotein E with ab183597 at 1/70 dilution (red) compared with a Rabbit IgG,monoclonal- Isotype control (**ab172730**) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti Rabbit IgG (Alexa Fluor® 488) at 1/500 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-Apolipoprotein E antibody [EPR19392] (ab183597)

Apolipoprotein E was immunoprecipitated from 1mg of Mouse plasma with ab183597 at 1/40 dilution. Western blot was performed from the immunoprecipitate using ab183597 at 1/2000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

Lane 1: Mouse plasma, 10µg (Input).

Lane 2: ab183597 IP in Mouse plasma.

Lane 3: Rabbit IgG,monoclonal[EPR25A] - Isotype Control (**ab172730**) instead of ab183597 in Mouse plasma.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds.

Anti-Apolipoprotein E antibody [EPR19392]

(ab183597)

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