

Product datasheet

Anti-P Glycoprotein antibody [EPR10364-57] ab170904

KO VALIDATED Recombinant RabMAb

★★★★☆ 8 Abreviews 46 References 18 Images

Overview

Product name	Anti-P Glycoprotein antibody [EPR10364-57]
Description	Rabbit monoclonal [EPR10364-57] to P Glycoprotein
Host species	Rabbit
Specificity	P-glycoprotein 1 (also known as Multidrug resistance protein 1) has a predicted molecular weight of 141 kDa, however it has 3 potential glycosylation sites (N-linked) which may affect the migration of the protein. In our hands ab170904 detects a predominant protein band migrating in the region of 180-200 kDa and typically will demonstrate a smear on the membrane in the region of the 150 – 300 kDa due to the glycosylation profile of the protein. It may be necessary to optimise your cell or tissue lysis protocol to efficiently extract P-glycoprotein 1 as it is a multi-pass membrane protein. Abcam recommends not boiling the sample after lysis. The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat
Tested applications	Suitable for: IHC-FoFr, IHC-P, WB Unsuitable for: ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment within Human P Glycoprotein aa 350-750. The exact sequence is proprietary. Database link: P08183
Positive control	WB: HEK-293T, C6, HeLa, HepG2 and HEK-293T cell lysates; human fetal brain tissue lysate; mouse and rat brain and kidney tissue lysates. Wild-type HAP1 cell lysate. IHC-P: Human hepatocellular carcinoma, brain and kidney tissues.
General notes	If you have any questions regarding this update, please contact our Scientific Support team.

Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMab[®] patents](#).

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

This product is a [recombinant rabbit monoclonal antibody](#).

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 0.05% BSA, PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR10364-57
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab170904** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-FoFr	★★★★★	Use at an assay dependent concentration.
IHC-P	★★★★★	1/1200. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See IHC antigen retrieval protocols . For unpurified use at 1/20 - 1/100 The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat
WB	★★★★☆	1/1000 - 1/5000. Predicted molecular weight: 141 kDa. For optimal detection Abcam recommends not boiling the sample after lysis.

Application notes Is unsuitable for ICC/IF.

Target

Function	Energy-dependent efflux pump responsible for decreased drug accumulation in multidrug-resistant cells.
Tissue specificity	Expressed in liver, kidney, small intestine and brain.
Involvement in disease	Genetic variations in ABCB1 are associated with susceptibility to inflammatory bowel disease type 13 (IBD13) [MIM:612244]. Inflammatory bowel disease is characterized by a chronic relapsing intestinal inflammation. It is subdivided into Crohn disease and ulcerative colitis phenotypes. Crohn disease may involve any part of the gastrointestinal tract, but most frequently the terminal ileum and colon. Bowel inflammation is transmural and discontinuous; it may contain

granulomas or be associated with intestinal or perianal fistulas. In contrast, in ulcerative colitis, the inflammation is continuous and limited to rectal and colonic mucosal layers; fistulas and granulomas are not observed. Both diseases include extraintestinal inflammation of the skin, eyes, or joints. Crohn disease and ulcerative colitis are commonly classified as autoimmune diseases.

Sequence similarities

Belongs to the ABC transporter superfamily. ABCB family. Multidrug resistance exporter (TC 3.A.1.201) subfamily.

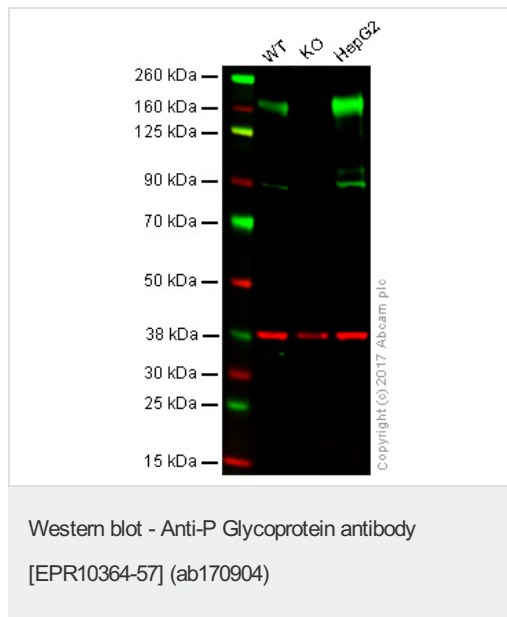
Contains 2 ABC transmembrane type-1 domains.

Contains 2 ABC transporter domains.

Cellular localization

Membrane.

Images



Lane 1: Wild type HAP1 whole cell lysate (20 µg)

Lane 2: P Glycoprotein knockout HAP1 whole cell lysate (20 µg)

Lane 3: HepG2 whole cell lysate (20 µg)

Lanes 1 - 3: Merged signal (red and green). Green - ab170904 observed at 160 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab170904 was shown to specifically react with P Glycoprotein when P Glycoprotein knockout samples were used. Wild-type and P Glycoprotein knockout samples were subjected to SDS-PAGE. ab170904 and ab8245 (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1 µg/ml and 1/10000 dilution respectively.

Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

All lanes : Anti-P Glycoprotein antibody [EPR10364-57] (ab170904) at 0.1 µg/ml (purified)

Lanes 1 & 3 : C6 (Rat glial tumor glial cell) whole cell lysates prepared using RIPA lysis method

Lanes 2 & 4 : C6 (Rat glial tumor glial cell) whole cell lysates prepared using 1%SDS Hot lysis method

Lysates/proteins at 15 µg per lane.

Secondary

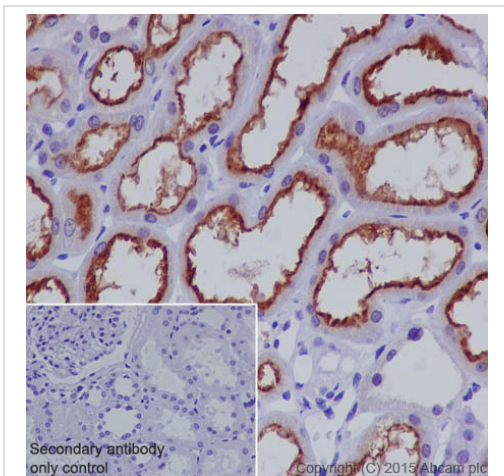
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 141 kDa

Observed band size: 180 kDa

[why is the actual band size different from the predicted?](#)

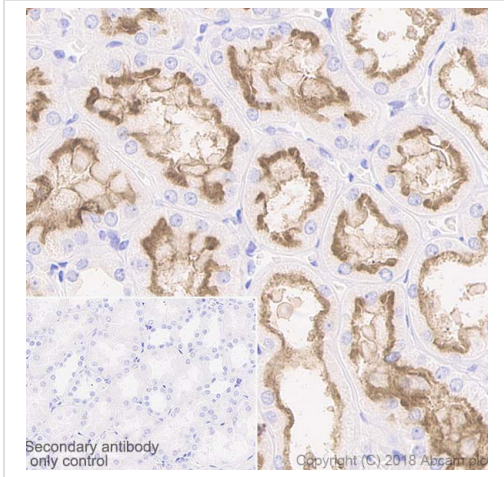
Blocking and diluting buffer: 5% NFDm/TBST.



Immunohistochemical staining of paraffin embedded human kidney with purified ab170904 at a working dilution of 1/100. The secondary antibody used is HRP goat anti-rabbit IgG H&L (ab97051) at 1/500. Counterstained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0.

PBS was used instead of the primary antibody as the negative control (inset).

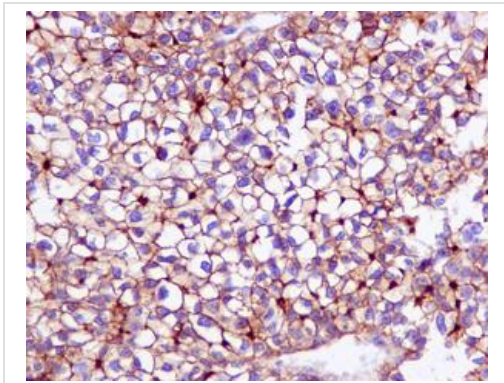
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

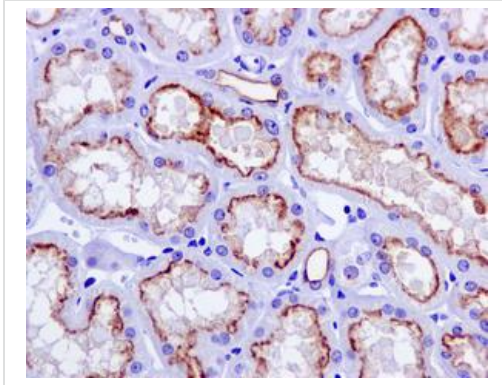
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue sections labeling P Glycoprotein with purified ab170904 at 1:1200 dilution (0.24 µg/ml). Heat mediated antigen retrieval was performed using [ab93684](#) (Tris/EDTA buffer, pH 9.0) ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Hematoxylin was used as a counterstain.

Negative control: PBS instead of the primary antibody (inset).



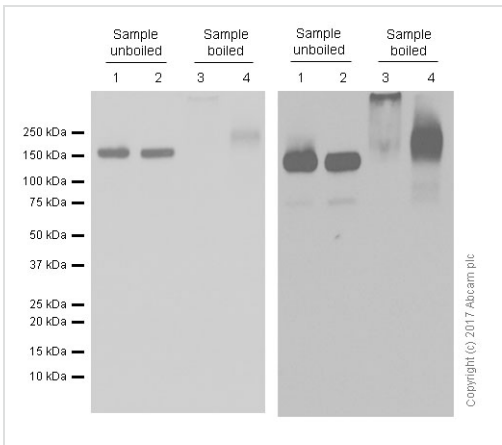
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human hepatocellular carcinoma tissue labeling P Glycoprotein with unpurified ab170904 at 1/250 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis human kidney tissue labeling P Glycoprotein with unpurified ab170904 at 1/250 dilution.



Western blot - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

All lanes : Anti-P Glycoprotein antibody [EPR10364-57] (ab170904) at 1/2000 dilution (Purified)

Lanes 1 & 3 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates prepared using RIPA lysis method

Lanes 2 & 4 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate prepared using 1% SDS hot lysis method

Lysates/proteins at 15 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 141 kDa

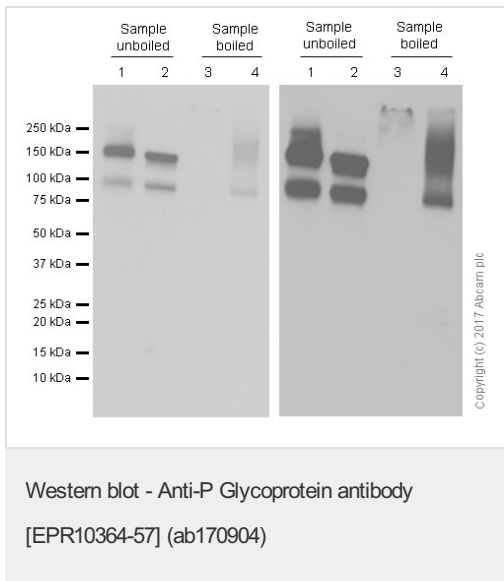
Observed band size: 180 kDa [why is the actual band size different from the predicted?](#)

Blocking and diluting buffer: 5% NFDm/TBST

Exposure time: Left image -10 seconds; Right image - 1 minute.

We suggest **not to boil** the sample after lysis.

For 1% SDS Hot Lysates preparation protocol, please refer to the protocol book in the protocol section and/or [here \(downloadable copy\)](#).



All lanes : Anti-P Glycoprotein antibody [EPR10364-57] (ab170904) at 1/2000 dilution (Purified)

Lanes 1 & 3 : Raw264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysates prepared using RIPA lysis method

Lanes 2 & 4 : Raw264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate prepared using 1%SDS lysis method

Lysates/proteins at 15 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

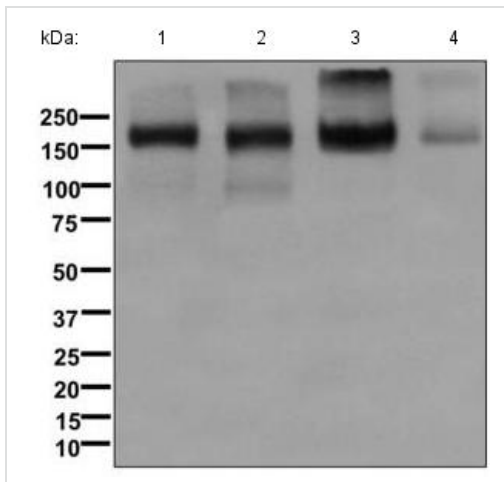
Predicted band size: 141 kDa

Observed band size: 180 kDa [why is the actual band size different from the predicted?](#)

Blocking and diluting buffer: 5% NFDM/TBST

Exposure time: Left image - 3 seconds; Right image - 10 seconds.

We suggest **not to boil** the sample after lysis.



Western blot - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

All lanes : Anti-P Glycoprotein antibody [EPR10364-57] (ab170904) at 1/1000 dilution (unpurified)

Lane 1 : HeLa (Human epithelial cell line from cervix adenocarcinoma) cell lysate

Lane 2 : HepG2 (Human liver hepatocellular carcinoma cell line) cell lysate

Lane 3 : HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) cell lysate

Lane 4 : Human fetal brain tissue lysate

Lysates/proteins at 10 µg per lane.

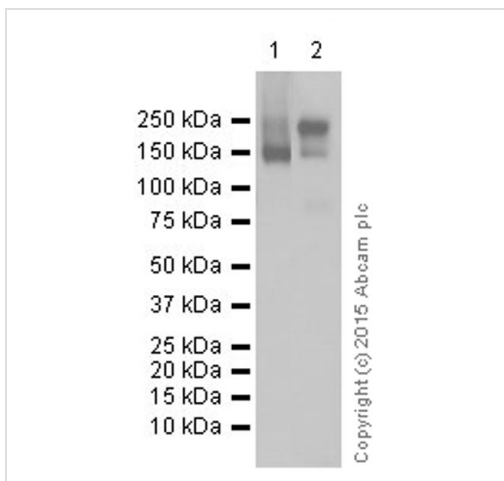
Secondary

Lanes 1-3 : HRP-conjugated goat anti-rabbit IgG at 1/2000 dilution

Lane 4 : Standard HRP labeled goat anti-rabbit at 1/2000 dilution

Developed using the ECL technique.

Predicted band size: 141 kDa



Western blot - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

All lanes : Anti-P Glycoprotein antibody [EPR10364-57] (ab170904) at 1/1000 dilution (purified)

Lane 1 : Mouse brain lysate

Lane 2 : C6 (Rat glial tumor cell line) cell lysate

Lysates/proteins at 10 µg per lane.

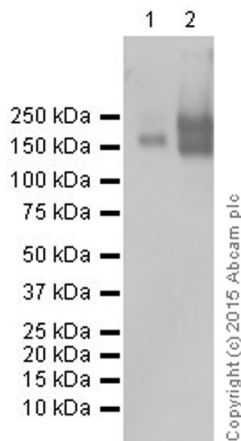
Secondary

All lanes : HRP goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 141 kDa

Observed band size: 180 kDa [why is the actual band size different from the predicted?](#)

Blocking/Dilution buffer: 5% NFDm/TBST.



Western blot - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

All lanes : Anti-P Glycoprotein antibody [EPR10364-57] (ab170904) at 1/2000 dilution (purified)

Lane 1 : HeLa (Human epithelial cell line from cervix adenocarcinoma) cell lysate

Lane 2 : HepG2 (Human liver hepatocellular carcinoma cell line) cell lysate

Lysates/proteins at 10 µg per lane.

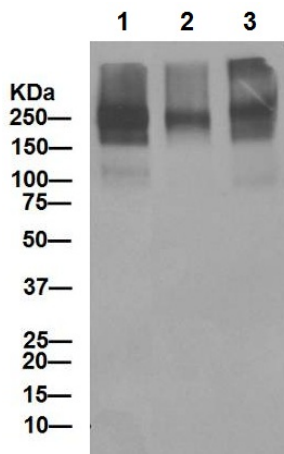
Secondary

All lanes : HRP goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 141 kDa

Observed band size: 180 kDa [why is the actual band size different from the predicted?](#)

Blocking/Dilution buffer: 5% NFDm/TBST.



Western blot - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

All lanes : Anti-P Glycoprotein antibody [EPR10364-57] (ab170904) at 1/200 dilution (unpurified)

Lane 1 : HepG2 (Human liver hepatocellular carcinoma cell line) cell lysate

Lane 2 : Mouse brain tissue lysate

Lane 3 : Rat brain tissue lysate

Lysates/proteins at 20 µg per lane.

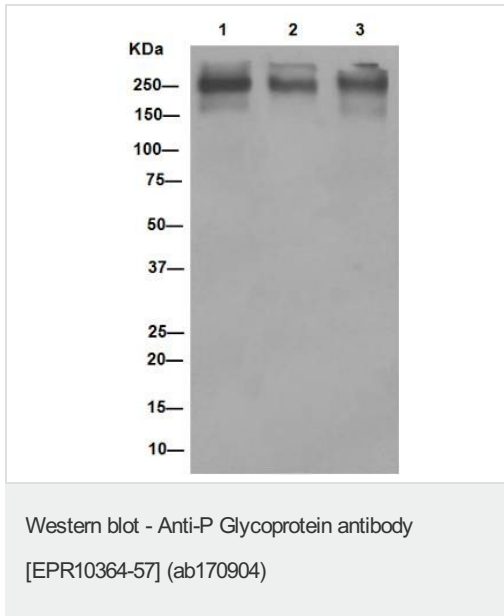
Secondary

All lanes : Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 141 kDa

Observed band size: 180 kDa [why is the actual band size different from the predicted?](#)

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



All lanes : Anti-P Glycoprotein antibody [EPR10364-57] (ab170904) at 1/1000 dilution (purified)

Lane 1 : HepG2 (Human liver hepatocellular carcinoma cell line) cell lysate

Lane 2 : Mouse brain tissue lysate

Lane 3 : Rat brain tissue lysate

Lysates/proteins at 20 µg per lane.

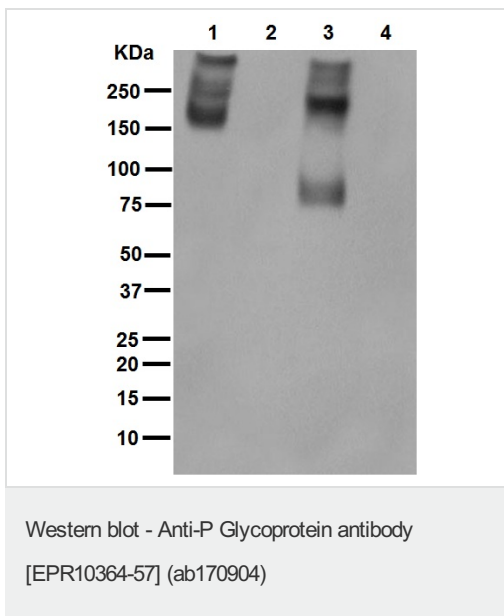
Secondary

All lanes : Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 141 kDa

Observed band size: 180 kDa [why is the actual band size different from the predicted?](#)

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



All lanes : Anti-P Glycoprotein antibody [EPR10364-57] (ab170904) at 1/1000 dilution (unpurified)

Lane 1 : Rat brain tissue lysate

Lane 2 : Rat heart tissue lysate

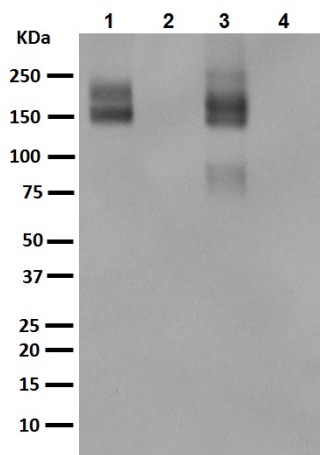
Lane 3 : Rat kidney tissue lysate

Lane 4 : Rat spleen tissue lysate

Predicted band size: 141 kDa

Observed band size: 180 kDa [why is the actual band size different from the predicted?](#)

Exposure time: 2 minutes



Western blot - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

All lanes : Anti-P Glycoprotein antibody [EPR10364-57] (ab170904) at 1/1000 dilution (unpurified)

Lane 1 : Mouse brain tissue lysate

Lane 2 : Mouse heart tissue lysate

Lane 3 : Mouse kidney tissue lysate

Lane 4 : Mouse spleen tissue lysate

Secondary

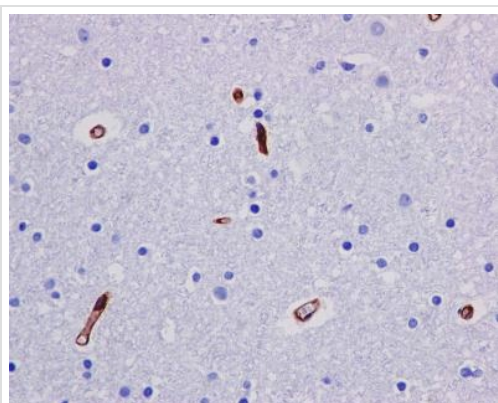
All lanes : HRP-conjugated goat anti-rabbit IgG (H+L) at 1/2000 dilution

Developed using the ECL technique.

Predicted band size: 141 kDa

Observed band size: 180 kDa [why is the actual band size different from the predicted?](#)

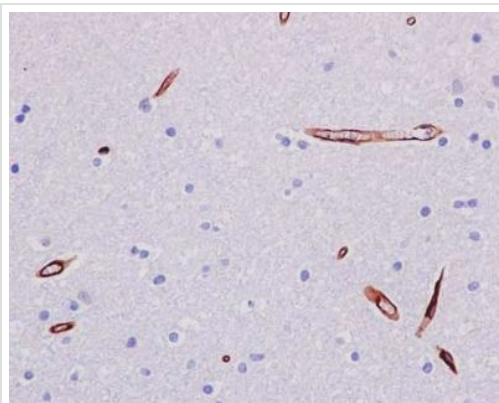
Exposure time: 2 minutes



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human brain tissue labeling P Glycoprotein with unpurified ab170904 at 1/20. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody.

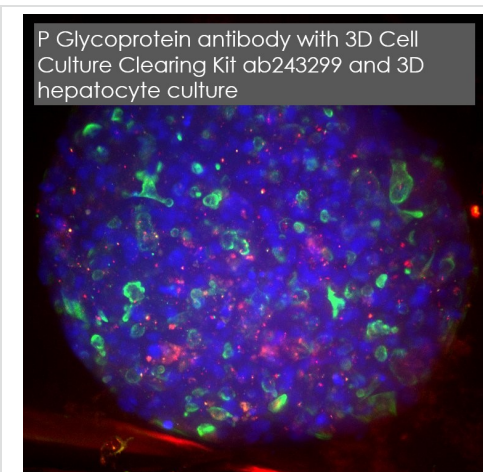
Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human brain tissue labeling P Glycoprotein with purified ab170904 at 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody.

Counterstained with hematoxylin.



P Glycoprotein antibody with 3D Cell Culture Clearing Kit ab243299 and 3D hepatocyte culture

Immunocytochemistry - Anti-P Glycoprotein antibody [EPR10364-57] (ab170904)

P Glycoprotein antibody ab170904 was used with 3D Cell Culture Clearing Kit [ab243299](#) to penetrate, stain and clear a 3D hepatocyte cell culture.

Blue: DAPI, Red:

Learn more about [3D cell culture and tissue clearing kits, reagents, and protocols](#) designed to make it easier to stain 3D cell cultures and thick tissue sections and get more data from each valuable tissue section.

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

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