abcam

Product datasheet

Anti-P Glycoprotein antibody [EPR10363] ab170903

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-P Glycoprotein antibody [EPR10363]
Description	Rabbit monoclonal [EPR10363] 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 ab170903 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.
Tested applications	**Suitable for:** IHC-P, WB **Unsuitable for:** Flow Cyt or ICC/IF
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment within Human P Glycoprotein aa 950 to the C-terminus. The exact sequence is proprietary. Database link: **P08183**
Positive control	HeLa, HepG2 and 293T cell lysates; Human kidney, liver and uterus tissues; 293T cells.
General notes	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**.

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: 50% Glycerol (glycerin, glycerine), 0.05% BSA, 49% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR10363
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab170903 in the following tested applications.

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

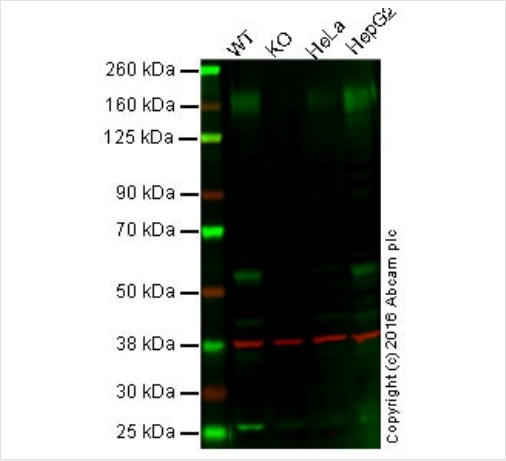
Application	Abreviews	Notes
IHC-P		1/250 - 1/600. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB	★☆☆☆☆ **(1)**	1/1000 - 1/5000. Predicted molecular weight: 141 kDa. For optimal detection Abcam recommends not boiling the sample after lysis.

Application notes Is unsuitable for Flow Cyt or 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

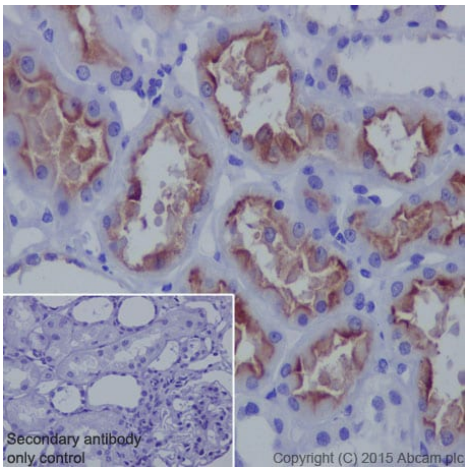


Western blot - Anti-P Glycoprotein antibody [EPR10363] (ab170903)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: P glycoprotein knockout HAP1 cell lysate (20 µg)
Lane 3: HeLa cell lysate (20 µg)
Lane 4: HepG2 cell lysate (20 µg)

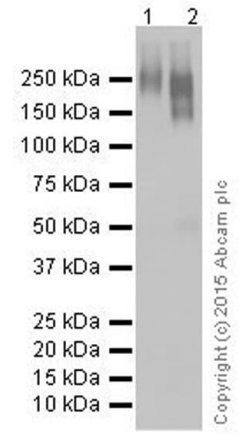
Lanes 1 - 4: Merged signal (red and green). Green - ab170903 observed at 160 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab170903 was shown to recognize P glycoprotein when P glycoprotein knockout samples were used, along with additional cross-reactive bands. Wild-type and P glycoprotein knockout samples were subjected to SDS-PAGE. ab170903 and **ab8245** (loading control to GAPDH) were diluted 1/500 and 1/10000 respectively and incubated overnight at 4°C. 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 1/10000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P Glycoprotein antibody [EPR10363] (ab170903)

Immunohistochemical staining of paraffin embedded human kidney with purified ab170903 at a working dilution of 1/600. The secondary antibody used is HRP goat anti-rabbit IgG H&L (**ab97051**) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.



Western blot - Anti-P Glycoprotein antibody [EPR10363] (ab170903)

All lanes : Anti-P Glycoprotein antibody [EPR10363] (ab170903) at 1/10000 dilution (purified)

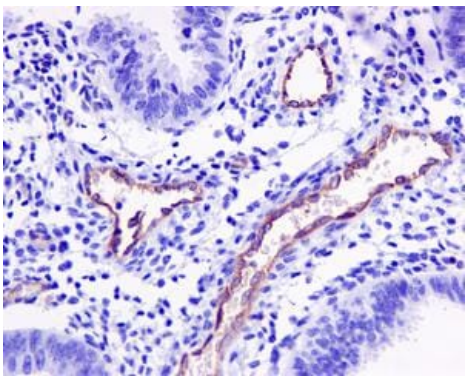
Lane 1 : HepG2 cell lysate
Lane 2 : HEK293 cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP goat anti-rabbit IgG (H+L) at 1/20000 dilution

Predicted band size: 141 kDa
Observed band size: 180 kDa

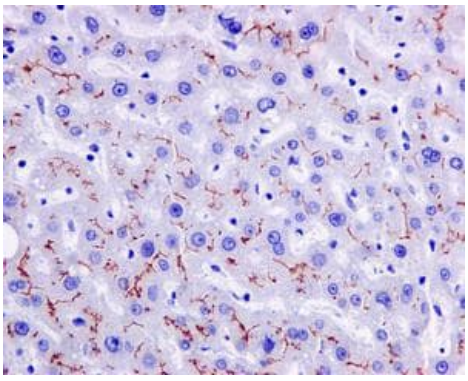
Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P Glycoprotein antibody [EPR10363] (ab170903)

Immunohistochemical analysis of paraffin-embedded Human uterus tissue, labeling P Glycoprotein using unpurified ab170903 at a 1/250 dilution.

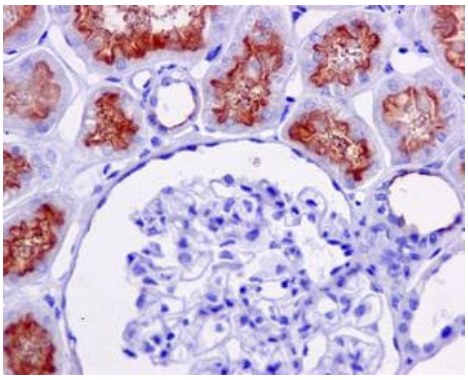
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P Glycoprotein antibody [EPR10363] (ab170903)

Immunohistochemical analysis of paraffin-embedded Human liver tissue, labeling P Glycoprotein using unpurified ab170903 at a 1/250 dilution.

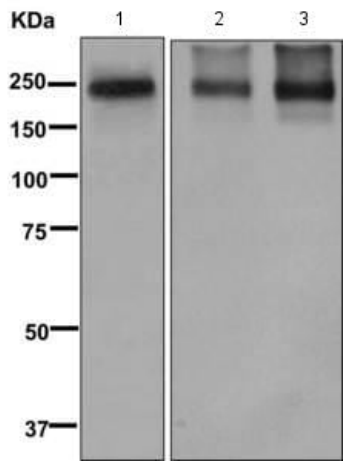
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P Glycoprotein antibody [EPR10363] (ab170903)

Immunohistochemical analysis of paraffin-embedded Human kidney tissue, labeling P Glycoprotein using unpurified ab170903 at a 1/250 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-P Glycoprotein antibody [EPR10363] (ab170903)

All lanes : Anti-P Glycoprotein antibody [EPR10363] (ab170903) at 1/1000 dilution (unpurified)

Lane 1 : HeLa cell lysate
Lane 2 : HepG2 cell lysate
Lane 3 : 293T cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat anti-rabbit HRP at 1/2000 dilution

Developed using the ECL technique.

Predicted band size: 141 kDa

Anti-P Glycoprotein antibody [EPR10363] (ab170903)

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