abcam

ab172630

Anti-MRP2 antibody [EPR10998]

Anti-MRP2 antibody [EPR10998] (ab172630) is a rabbit monoclonal antibody detecting MRP2 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 10 publications

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR10998
Purification technique	Affinity purification Protein A
Concentration	0.65 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	**For unpurified use at 1/250 - 1/500.**

Expected

Species	Mouse

Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/70
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. For unpurified use at 1/100 - 1/500.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information ABCC2

Function ATP-dependent transporter of the ATP-binding cassette (ABC) family that binds and hydrolyzes ATP to enable active transport of various substrates including many drugs, toxicants and endogenous compound across cell membranes. Transports a wide variety of conjugated organic anions such as sulfate-, glucuronide- and glutathione (GSH)-conjugates of endo- and xenobiotics substrates (PubMed:10220572, PubMed:10421658, PubMed:11500505, PubMed:16332456). Mediates hepatobiliary excretion of mono- and bis-glucuronidated bilirubin molecules and therefore play an important role in bilirubin detoxification (PubMed:10421658). Also mediates hepatobiliary excretion of others glucuronide conjugates such as 17beta-estradiol 17-glucosiduronic acid and leukotriene C4 (PubMed:11500505). Transports sulfated bile salt such as taurolithocholate sulfate (PubMed:16332456). Transports various anticancer drugs, such as anthracycline, vinca alkaloid and methotrexate and HIV-drugs such as protease inhibitors (PubMed:10220572, PubMed:11500505, PubMed:12441801). Confers resistance to several anti-cancer drugs including cisplatin, doxorubicin, epirubicin, methotrexate, etoposide and vincristine (PubMed:10220572, PubMed:11500505).

Storage

Shipped at conditions	Conditional Ambient

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-MRP2 antibody [EPR10998] (ab172630) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse samples.

What is the molecular weight of MRP2?
Anti-MRP2 [EPR10998] (ab172630) specifically detects a band for MRP2 (UniProt: Q92887) at a molecular weight of 174kDa.

Trusted by the scientific community
Anti-MRP2 [EPR10998] (ab172630) was first used in a scientific publication in 2013 and has been cited over 10 times in peer-reviewed journals.

Specificity confirmed
The specificity of Anti-MRP2 antibody [EPR10998] (ab172630) has been confirmed by Western blot testing in ABCC2 Knockout A549 cells.

Other related products
We have a range of other formats of antibody clone [EPR10998] also available for your convenience: ab172630, Carrier free - ab240169, Alexa Fluor® 488 - ab320174, Alexa Fluor® 647 - ab320175, Alexa Fluor® 555 - ab320176, Alexa Fluor® 594 - ab320177, PE - ab320178, APC - ab320179

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	MRP2 also known as ABCC2 or MRP-2 transporter is an ATP-binding cassette transporter. This protein with a molecular mass of about 190 kDa is widely expressed in tissues such as the liver kidney and intestine. MRP2 plays a role in drug and metabolite transport moving various organic anions across cellular membranes. It locates to the canalicular membrane of hepatocytes where it functions in secreting conjugated bilirubin and drugs into bile.
Biological function summary	MRP2 contributes to cellular detoxification processes. It does not form part of a larger protein complex but works as an independent entity. MRP2 protein actively transports conjugated substances out of cells protecting tissues from potential damage from toxins drugs and other organic anions. This transporter mediates the excretion of glucuronide sulfate and glutathione conjugates playing an important role in phase III of drug metabolism.
Pathways	MRP2 transporter is integral to xenobiotic metabolism. It interconnects with the conjugation pathways that prepare compounds for excretion. The pathway functions with cytochrome P450 enzymes and other related transport proteins like MDR1 facilitating the secretion of detoxified metabolites. MRP2 activity influences pharmacokinetics and pharmacodynamics by modulating drug disposition and excretion.
Associated diseases and disorders	MRP2 is associated with Dubin-Johnson syndrome and cholestasis. Dubin-Johnson syndrome arises from mutations in the ABCC2 gene leading to defective bilirubin excretion and jaundice. Cholestasis involves impaired bile excretion where MRP2 and possibly related proteins like BSEP play roles in bile salt export. Understanding MRP2 functioning aids in assessing risk and treatment strategies for these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

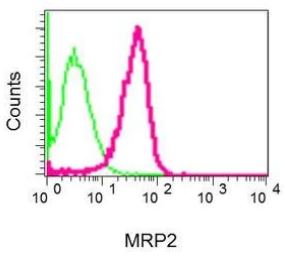
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

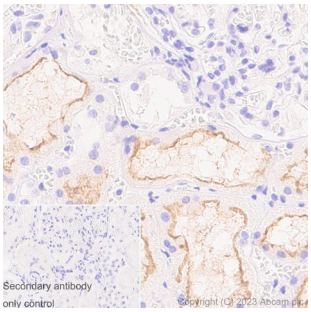
12 product images



Flow Cytometry (Intracellular) - Anti-MRP2 antibody [EPR10998] (ab172630)

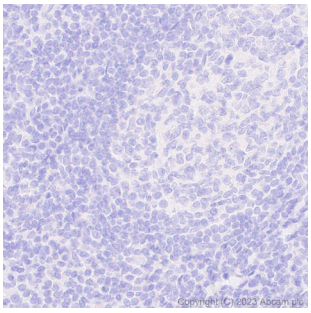
MRP2 Flow Cytometry (Intracellular) staining using rabbit Anti-MRP2 antibody

Intracellular flow cytometric analysis of permeabilized A549 cells usingab172630 at a 1/100 dilution (red) or a rabbit IgG (negative) (green).



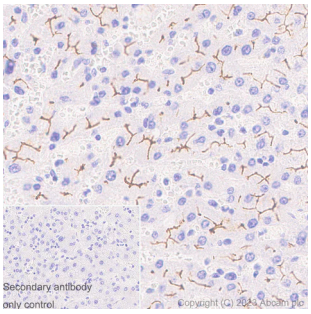
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MRP2 antibody [EPR10998] (ab172630)

Immunohistochemistry analysis of Paraffin-embedded human kidney tissue sections labeling MRP2 with ab172630 at 10000 dilution followed by LeicaDS9800 (Bond™ Polymer Refine Detection). Sections were counterstained with Hematoxylin. Antigen retrieval was heat mediated with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins. Positive staining on human kidney. The section was incubated with ab172630 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument



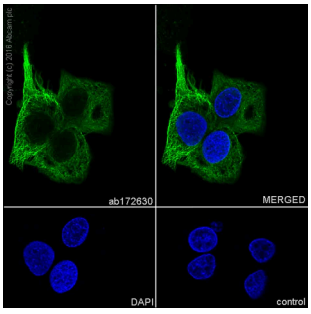
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MRP2 antibody [EPR10998] (ab172630)

Immunohistochemistry analysis of Paraffin-embedded human tonsil tissue sections labeling MRP2 with ab172630 at 10000 dilution followed by LeicaDS9800 (Bond™ Polymer Refine Detection). Sections were counterstained with Hematoxylin. Antigen retrieval was heat mediated with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins. Negative control: no staining on the human tonsil. The section was incubated with ab172630 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MRP2 antibody [EPR10998] (ab172630)

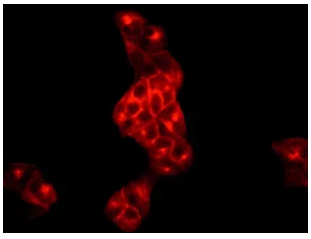
Immunohistochemistry analysis of Paraffin-embedded human liver tissue sections labeling MRP2 with ab172630 at 10000 dilution followed by LeicaDS9800 (Bond™ Polymer Refine Detection). Sections were counterstained with Hematoxylin. Antigen retrieval was heat mediated with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins. Positive staining on the bile ducts in human liver. The section was incubated with ab172630 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunocytochemistry/ Immunofluorescence - Anti-MRP2 antibody [EPR10998] (ab172630)

MRP2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-MRP2 antibody

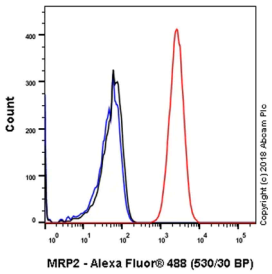
Immunocytochemistry/ Immunofluorescence analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling MRP2 with purified ab172630 at 1:100 dilution (7.1 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with None. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunocytochemistry/ Immunofluorescence - Anti-MRP2 antibody [EPR10998] (ab172630)

MRP2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-MRP2 antibody

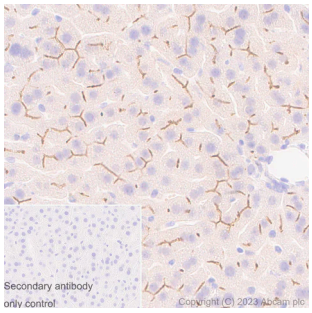
Immunocytochemistry/ Immunofluorescence analysis of A549 cells labeling MRP2 with ab172630 at a 1/250 dilution.



Flow Cytometry (Intracellular) - Anti-MRP2 antibody [EPR10998] (ab172630)

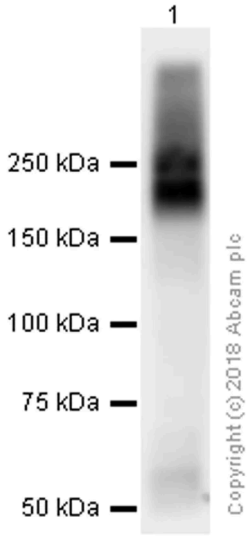
MRP2 Flow Cytometry (Intracellular) staining using rabbit Anti-MRP2 antibody

Intracellular Flow Cytometry analysis of A549 (Human lung carcinoma epithelial cell) cells labeling MRP2 with purified ab172630 at 1/70 dilution (10 µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MRP2 antibody [EPR10998] (ab172630)

Immunohistochemistry analysis of Paraffin-embedded mouse liver tissue sections labeling MRP2 with ab172630 at 10000 dilution followed by LeicaDS9800 (Bond™ Polymer Refine Detection). Sections were counterstained with Hematoxylin. Antigen retrieval was heat mediated with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins. Positive staining on the bile ducts in mouse liver. The section was incubated with ab172630 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-MRP2 antibody [EPR10998] (ab172630)

The multiple bands are consistent with what has been described in PMID: 18832477
All lanes:
Western blot - Anti-MRP2 antibody [EPR10998] (ab172630) at 1/2000 dilution

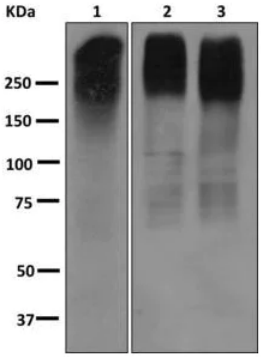
All lanes:
HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 174 kDa

Observed band size: >190 kDa



Western blot - Anti-MRP2 antibody [EPR10998] (ab172630)

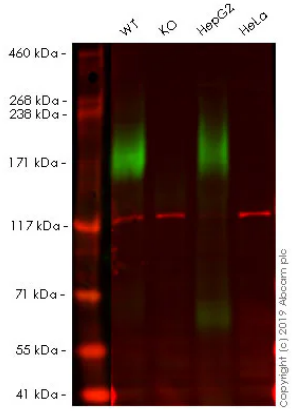
All lanes:
Western blot - Anti-MRP2 antibody [EPR10998] (ab172630) at 1/1000 dilution

Lane 1:
Human fetal liver lysate at 10 µg

Lane 2:
HepG2 lysate at 10 µg

Lane 3:
A549 lysate at 10 µg

Predicted band size: 174 kDa



Western blot - Anti-MRP2 antibody [EPR10998] (ab172630)

MRP2 Western blot staining using rabbit Anti-MRP2 antibody

Lanes 1 - 4: Merged signal (red and green). Green - ab172630 observed at 210 kDa. Red - loading control, ab130007, observed at 130 kDa.
ab172630 was shown to recognize MRP2 in wild-type A549 cells as signal was lost at the expected MW in ABCC2 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and ABCC2 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. ab172630 and ab130007 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/1000 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 1/20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-MRP2 antibody [EPR10998] (ab172630) at 1/1000 dilution

Lane 1:
Wild-type A549 (Human lung carcinoma cell line) whole cell lysate at 20 µg

Lane 2:
Western blot - Human ABCC2 knockout A549 cell lysate (ab261663) at 20 µg

Lane 3:
Hep G2 (Human liver hepatocellular carcinoma cell line) whole cell lysate at 20 µg

Lane 4:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 174 kDa

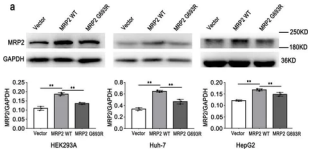


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Western blot - Anti-MRP2 antibody [EPR10998] (ab172630)

MRP2 Western blot staining using rabbit Anti-MRP2 antibody

MRP2 western blot using anti-MRP2 antibody [EPR10998] ab172630. Publication image and figure legend from Wu, L., Li, Y., et al., 2020, Orphanet J Rare Dis, PubMed 32183854.

ab172630 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab172630 please see the product overview.

The MRP2 p.G693R mutant showed decreased expression and mislocalization in three cell lines in vitro. a Western blot demonstrated significantly decreased expression of MRP2 in three cell lines expressing the p.G693R mutant compared with those expressing wild-type MRP2. **p < 0.05. b Immunofluorescence assay showed the mislocalization of the MRP2 p.G693R mutant, which was predominantly retained in the cytoplasm rather than the cell surface

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.