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KD-Validated Anti-ABCG2 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI1189

Specification

KD-Validated Anti-ABCG2 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q9UNQ0
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 72 kDa , observed, 72 kDa KDa**
Gene Name	**ABCG2**
Aliases	**ABCG2; ATP Binding Cassette Subfamily G Member 2 (Junior Blood Group); BCRP; ABCP; MXR; EST157481; CD338; ATP-Binding Cassette, Sub-Family G (WHITE), Member 2 (Junior Blood Group); Broad Substrate Specificity ATP-Binding Cassette Transporter ABCG2; Placenta-Specific ATP-Binding Cassette Transporter; Mitoxantrone Resistance-Associated Protein; Breast Cancer Resistance Protein; Urate Exporter; CDw338; BCRP1; Broad Substrate Specificity ATP-Binding Cassette Transporter ABCG2 Isoform 1 (Junior Blood Group); Multi Drug Resistance Efflux Transport ATP-Binding Cassette Sub-Family G (WHITE) Member 2; ATP-Binding Cassette, Sub-Family G (WHITE), Member 2; ATP-Binding Cassette Sub-Family G Member02; ATPbinding Cassette Transporter ABCG2; ATP-Binding Cassette Transporter G2; Placenta Specific MDR Protein 2; ABC Transporter; CD338 Antigen; EC 7.6.2.2; CDw38; UAQTL1; ABC15; GOUT1; MXR-1; BMDP; MXR1; MRX**
Immunogen	**A synthesized peptide derived from human ABCG2**

KD-Validated Anti-ABCG2 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**9429**

Other Names

Broad substrate specificity ATP-binding cassette transporter ABCG2, 7.6.2.2, ATP-binding cassette sub-family G member 2, Breast cancer resistance protein, CDw338, Mitoxantrone resistance-associated protein, Placenta-specific ATP-binding cassette transporter, Urate exporter, CD338, ABCG2, ABCP, BCRP, BCRP1, MXR

KD-Validated Anti-ABCG2 Rabbit Monoclonal Antibody - Protein Information

Name ABCG2

Synonyms ABCP, BCRP, BCRP1, MXR

Function
Broad substrate specificity ATP-dependent transporter of the ATP-binding cassette (ABC) family that actively extrudes a wide variety of physiological compounds, dietary toxins and xenobiotics from cells (PubMed:11306452, PubMed:12958161, PubMed:19506252, PubMed:20705604, PubMed:28554189, PubMed:30405239, PubMed:31003562). Involved in porphyrin homeostasis, mediating the export of protoporphyrin IX (PPIX) from both mitochondria to cytosol and cytosol to extracellular space, it also functions in the cellular export of heme (PubMed:20705604, PubMed:23189181). Also mediates the efflux of sphingosine-1-P from cells (PubMed:20110355). Acts as a urate exporter functioning in both renal and extrarenal urate excretion (PubMed:19506252, PubMed:20368174, PubMed:22132962, PubMed:31003562, PubMed:36749388). In kidney, it also functions as a physiological exporter of the uremic toxin indoxyl sulfate (By similarity). Also involved in the excretion of steroids like estrone 3-sulfate/E1S, 3beta-sulfooxy-androst-5-en-17-one/DHEAS, and other sulfate conjugates (PubMed:12682043, PubMed:28554189, PubMed:30405239). Mediates the secretion of the riboflavin and biotin vitamins into milk (By similarity). Extrudes pheophorbide a, a phototoxic porphyrin catabolite of chlorophyll, reducing its bioavailability (By similarity). Plays an important role in the exclusion of xenobiotics from the brain (Probable). It confers to cells a resistance to multiple drugs and other xenobiotics including mitoxantrone, pheophorbide, camptothecin, methotrexate, azidothymidine, and the anthracyclines daunorubicin and doxorubicin, through the control of their efflux (PubMed:11306452, PubMed:12477054, PubMed:15670731, PubMed:18056989, PubMed:31254042). In placenta, it limits the penetration of drugs from the maternal plasma into the fetus (By similarity). May play a role in early stem cell self-renewal by blocking differentiation (By similarity). In inflammatory macrophages, exports itaconate from the cytosol to the extracellular compartment and limits the activation of TFEB-dependent lysosome biogenesis involved in antibacterial innate immune response.

Cellular Location
Cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Mitochondrion membrane; Multi-pass membrane protein. Note=Enriched in membrane

lipid rafts

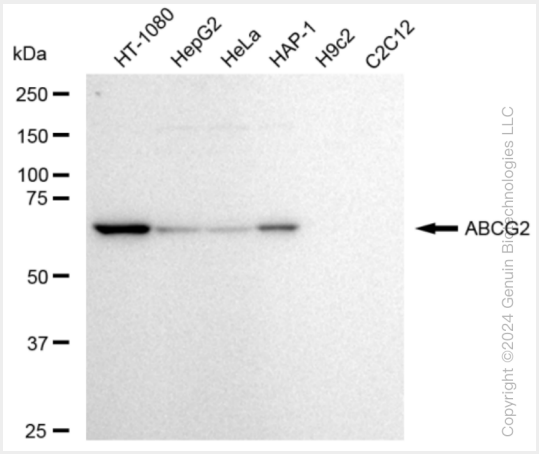
Tissue Location
Highly expressed in placenta (PubMed:9850061). Low expression in small intestine, liver and colon (PubMed:9861027) Expressed in brain (at protein level) (PubMed:12958161)

KD-Validated Anti-ABCG2 Rabbit Monoclonal Antibody - Protocols

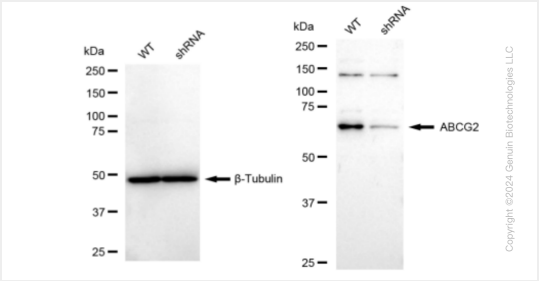
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-ABCG2 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-ABCG2 antibody (Cat#AGI1189). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-ABCG2 antibody (Cat#AGI1189, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-ABCG2 antibody (Cat#AGI1189). ABCG2 expression in wild type (WT) and ABCG2 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-ABCG2 antibody (Cat#AGI1189, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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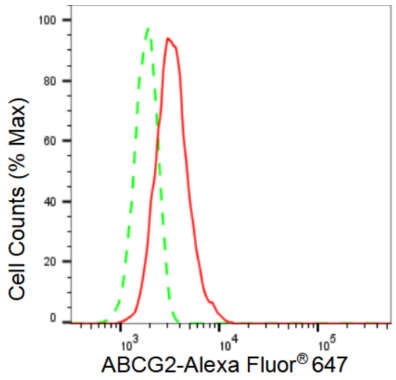
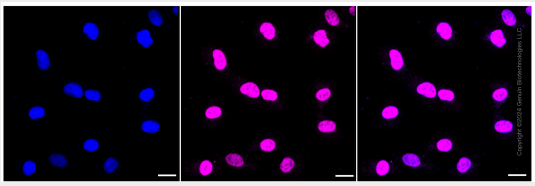


Flow cytometric analysis of ABCG2 expression in HT-1080 cells using ABCG2 antibody (Cat#AGI1189, 1:2,000). Green, isotype control; red, ABCG2.



Immunocytochemical staining of HT-1080 cells with ABCG2 antibody (Cat#AGI1189, 1:1,000). Nuclei were stained blue with DAPI; ABCG2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.