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ABCG2 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1566a

Specification

ABCG2 Antibody - Product Information

Application	**WB, IHC, FC, ICC, E**
Primary Accession	Q9UNQ0
Reactivity	**Human, Mouse, Monkey**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**72kDa KDa**

Description
The membrane-associated protein encoded by this gene is included in the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the White subfamily. Alternatively referred to as a breast cancer resistance protein, this protein functions as a xenobiotic transporter which may play a major role in multi-drug resistance. It likely serves as a cellular defense mechanism in response to mitoxantrone and anthracycline exposure. Significant expression of this protein has been observed in the placenta, which may suggest a potential role for this molecule in placenta tissue.Tissue specificity: Highly expressed in placenta. Low expression in small intestine, liver and colon.

Immunogen
Purified recombinant fragment of human ABCG2 expressed in E. Coli.

Formulation
Ascitic fluid containing 0.03% sodium azide.

ABCG2 Antibody - Additional Information

Gene ID 9429

Other Names
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

Dilution
WB~~1/500 - 1/2000
IHC~~1/500 - 1/2000
FC~~1/200 - 1/400
ICC~~N/A
E~~1/10000

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small

aliquots to prevent freeze-thaw cycles.

Precautions
ABCG2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ABCG2 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.

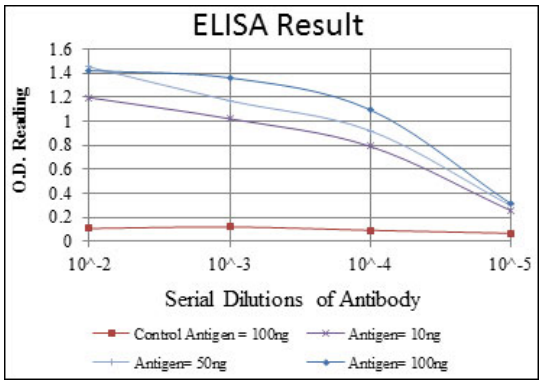
Cellular Location
Cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Mitochondrion membrane; Multi-pass membrane protein. Note=Enriched in membrane lipid rafts

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)

ABCG2 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



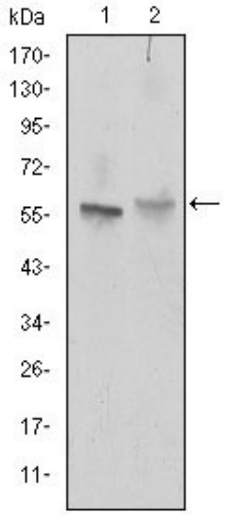


Figure 1: Western blot analysis using ABCG2 mouse mAb against NIH/3T3 (1) and Cos7 (2) cell

lysate.

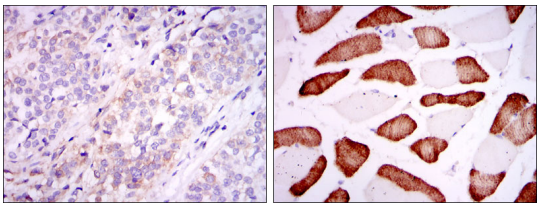


Figure 2: Immunohistochemical analysis of paraffin-embedded bladder cancer tissues (left) and skeletal muscle tissues (right) using ABCG2 mouse mAb with DAB staining.

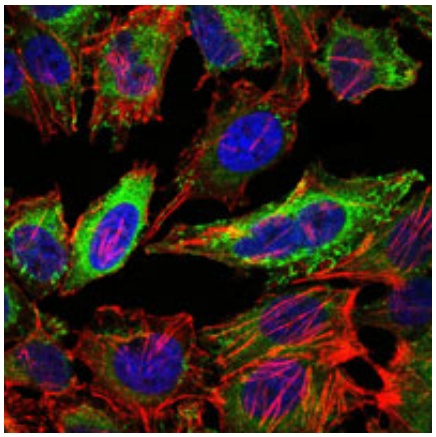


Figure 3: Immunofluorescence analysis of Hela cells using ABCG2 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

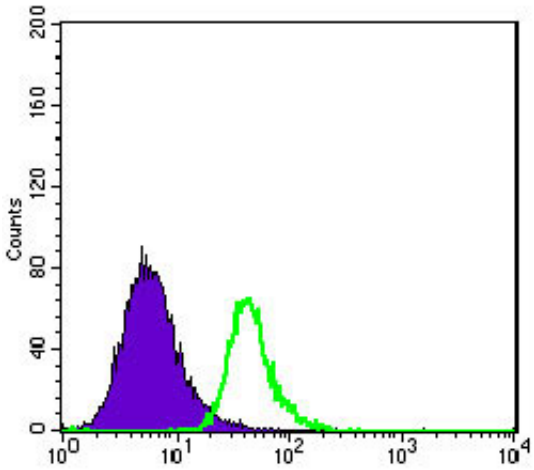


Figure 4: Flow cytometric analysis of HepG2 cells using ABCG2 mouse mAb (green) and negative control (purple).

ABCG2 Antibody - References

1. Carcinogenesis. 2008 Dec;29(12):2289-97. 2. Pharm Res. 2009 Feb;26(2):449-58.