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KD-Validated Anti-ABCG2 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1189

Product Information

Application	WB, FC, ICC
Primary Accession	Q9UNQ0
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB3130
Calculated MW	72314
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

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

Protein Information

Name	ABCG2 (HGNC:74)
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 vitamins riboflavin and biotin into milk (By similarity). Involved in the excretion of the riboflavin-derived compound lumichrome into the intestinal lumen and in its secretion into milk (PubMed:39337371). 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 (PubMed:38181789). Operates at apical membranes of polarized cells such as hepatocytes and intestinal epithelial cells, where it may contribute to the efflux of conjugated substrates from intestine and liver into the intestinal lumen as well as their enterohepatic recycling. Can transport estrogen and androgen substrates conjugated with glucuronate or sulfate at C-3, C-16 and C-17 positions. Among androgen glucuronates, appears to selectively transport dihydrotestosterone-17-glucuronate while displaying no transporter activity toward testosterone, androsterone and etiocholanolone glucuronates (PubMed:29175180, PubMed:30959153, PubMed:39993711).

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)

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