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ABCG2 (BCRP) Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP1490b

Specification

ABCG2 (BCRP) Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q9UNQ0

ABCG2 (BCRP) Antibody (C-term) Blocking peptide - 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

Target/Specificity
The synthetic peptide sequence used to generate the antibody <a >AP1490b was selected from the C-term region of human ABCG2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

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

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ABCG2 (BCRP) Antibody (C-term) Blocking peptide - 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:<a href="http://www.uniprot.org/citations/31003562"

target="_blank">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 (BCRP) Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

ABCG2 (BCRP) Antibody (C-term) Blocking peptide - Images

ABCG2 (BCRP) Antibody (C-term) Blocking peptide - Background

ABCG2 is a membrane-associated protein 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.

ABCG2 (BCRP) Antibody (C-term) Blocking peptide - References

Xie,Y., J. Biol. Chem. 283 (6), 3349-3356 (2008)Tamura,A., Drug Metab. Pharmacokinet. 22 (6), 428-440 (2007)