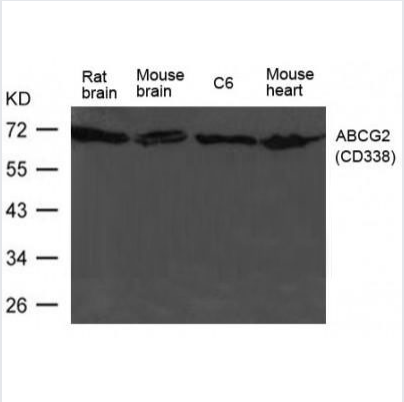
ABCG2 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ABCG2, Polyclonal Antibody
Full Product Name	ABCG2 Antibody
Product Gene Name	anti-ABCG2 antibody
Product Synonym Names	ABC transporter; ABC15; ABCG 2; ABCG2; ABCG2_HUMAN; ABCP; ATP binding cassette sub family G (WHITE) member 2; ATP binding cassette transporter G2; ATP-binding cassette sub-family G member 2; BCRP; BCRP1; BMDP; Breast cancer resistance protein; CD338; CDw338; CDw338 antigen; EST157481; GOUT1; MGC102821; Mitoxantrone resistance associated protein; Mitoxantrone resistance-associated protein; MRX; Multi drug resistance efflux transport ATP binding cassette sub family G (WHITE) member 2; MXR; MXR1; Placenta specific ATP binding cassette transporter; Placenta specific MDR protein; Placenta-specific ATP-binding cassette transporter; UAQTL1
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat Predicted Reactivity: Rabbit (88%)
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin
Concentration	1mg/ml (lot specific)
Specificity	ABCG2 Antibody detects endogenous levels of total ABCG2. Tissue Specificity: Highly expressed in placenta. Low expression in small intestine, liver and colon. Expressed in brain (at protein level).
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.
Antibody/Peptide Pairs	ABCG2 peptide (MBS9616347) is used for blocking the activity of ABCG2 antibody (MBS9613066)
Molecular Weight	72,314 Da
OMIM	138900
3D Structure	ModBase 3D Structure for Q9UNQ0
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Immunogen	A synthesized peptide derived from human ABCG2 (CD338), corresponding to a region within the internal amino acids.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	N-glycosylated. Glycosylation-deficient ABCG2 is normally expressed and functional.Phosphorylated. Phosphorylation at Thr-362 by PIM1 is induced by drugs like mitoxantrone and is associated with cells increased drug resistance. It regulates the localization to the plasma membrane, the homooligomerization and therefore, the activity of the transporter.
Subunit Structure	Homodimer; disulfide-linked. The minimal functional unit is a homodimer, but the major oligomeric form in plasma membrane is a homotetramer with possibility of higher order oligomerization up to homododecamers.

Similarity	The extracellular loop 3 (ECL3) is involved in binding porphyrins and transfer them to other carriers, probably albumin.Belongs to the ABC transporter superfamily. ABCG family. Eye pigment precursor importer (TC 3.A.1.204) subfamily.
Subcellular 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.
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-ABCG2 antibody	Western Blot (WB), Peptide ELISA (EIA)
Application Notes for anti-ABCG2 antibody	WB: 1:500-1:1000 Peptide ELISA: 1:20,000-1:40,000
Related Product Information for anti-ABCG2 antibody	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. 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. Also mediates the efflux of sphingosine-1-P from cells. Acts as a urate exporter functioning in both renal and extrarenal urate excretion. 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. 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. 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). Xenobiotic transporter that may play an important role in the exclusion of xenobiotics from the brain. May be involved in brain-to-blood efflux. Appears to play a major role in the multidrug resistance phenotype of several cancer cell lines. When overexpressed, the transfected cells become resistant to mitoxantrone, daunorubicin and doxorubicin, display diminished intracellular accumulation of daunorubicin, and manifest an ATP-dependent increase in the efflux of rhodamine 123.
Other Notes	Small volumes of anti-ABCG2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ABCG2 purchase	MBS9613066 is an antibody targeting ABCG2. Also known as ABCG2 Antibody. Reactive in Human, Mouse, Rat Predicted Reactivity: Rabbit (88%). Host: Rabbit.



Western Blot (WB) of anti-ABCG2 antibody
Western blot analysis of extract from HL-60 cells using ABCG2(CD338) Antibody

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ABCG2. It may not necessarily be applicable to this product.

NCBI GI #	67462103

NCBI GeneID	9429
NCBI Accession #	Q9UNQ0.3
UniProt Primary Accession #	Q9UNQ0
UniProt Secondary Accession #	O95374; Q4W5I3; Q53ZQ1; Q569L4; Q5YLG4; Q86V64; Q8IX16; Q96LD6; Q96TA8; A0A1W3; A8K1T5
UniProt Related Accession #	Q9UNQ0
NCBI Official Full Name	ATP-binding cassette sub-family G member 2
NCBI Official Synonym Full Names	ATP-binding cassette, sub-family G (WHITE), member 2
NCBI Official Symbol	ABCG2
NCBI Official Synonym Symbols	MRX; MXR; ABCP; BCRP; BMDP; MXR1; ABC15; BCRP1; CD338; GOUT1; CDw338; UAQTL1; EST157481
UniProt Protein Name	ATP-binding cassette sub-family G member 2
UniProt Synonym Protein Names	Breast cancer resistance protein; CDw338; Mitoxantrone resistance-associated protein; Placenta-specific ATP-binding cassette transporter; Urate exporter
Protein Family	ABC transporter G family
UniProt Gene Name	ABCG2
UniProt Synonym Gene Names	ABCP; BCRP; BCRP1; MXR
UniProt Entry Name	ABCG2_HUMAN
NCBI Protein Information	ATP-binding cassette sub-family G member 2; urate exporter; ABC transporter; placenta specific MDR protein; breast cancer resistance protein; ATP-binding cassette transporter G2; mitoxantrone resistance-associated protein; placenta-specific ATP-binding ca
NCBI Summary for ABCG2	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. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2012]

UniProt Comments for ABCG2	ABCG2: Xenobiotic transporter that may play an important role in the exclusion of xenobiotics from the brain. May be involved in brain-to-blood efflux. Appears to play a major role in the multidrug resistance phenotype of several cancer cell lines. When overexpressed, the transfected cells become resistant to mitoxantrone, daunorubicin and doxorubicin, display diminished intracellular accumulation of daunorubicin, and manifest an ATP- dependent increase in the efflux of rhodamine 123. Monomer or homodimer; disulfide-linked. Up-regulated in brain tumors. Highly expressed in placenta. Low expression in small intestine, liver and colon. Belongs to the ABC transporter superfamily. ABCG family. Eye pigment precursor importer (TC 3.A.1.204) subfamily. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Transporter; Transporter, iron; Membrane protein, multi-pass; Membrane protein, integral; Transporter, ABC family Chromosomal Location of Human Ortholog: 4q22 Cellular Component: nucleoplasm; mitochondrial membrane; integral to membrane; plasma membrane; nucleus Molecular Function: protein binding; protein homodimerization activity; ATPase activity, coupled to transmembrane movement of substances; transporter activity; heme transporter activity; xenobiotic-transporting ATPase activity; ATP binding Biological Process: response to drug; heme transport; urate metabolic process; transport; cellular iron ion homeostasis; xenobiotic transport; multidrug transport; transmembrane transport Disease: Blood Group, Junior System; Uric Acid Concentration, Serum, Quantitative Trait Locus 1
Research Articles on ABCG2	**1.** This study is the first to report on the anti-MM CSC activity by PTX-NPs as a single agent or used together with anti-ABCG2 mAbs to treat multiple myeloma.
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