ABCG2 Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	ABCG2, Blocking Peptide
Full Product Name	ABCG2 Blocking Peptide
Product Gene Name	ABCG2 blocking peptide
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
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	ABCG2 peptide (MBS9616347) is used for blocking the activity of ABCG2 antibody (MBS9613066)
Molecular Weight	72,314 Da
OMIM	138900
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.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for ABCG2 blocking peptide	Blocking/Control
Related Product Information for ABCG2 blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of ABCG2 blocking peptide 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	MBS9616347 is a blocking peptide targeting ABCG2.

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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