

Rabbit BCRP/ABCG2 Polyclonal Antibody | anti-ABCG2 antibody

Anti-BCRP/ABCG2 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125549	Rabbit	Human, Mouse, Rat	ELISA, Flow Cytometry, Functional Assay, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

BCRP/ABCG2; Polyclonal Antibody; Anti-BCRP/ABCG2 Antibody; ABCG2; ABCP; BCRP; BCRP1; MXR; Broad substrate specificity ATP-binding cassette transporter ABCG2; EC 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; CD antigen CD338; ATP-binding cassette; sub-family G (WHITE); member 2; anti-ABCG2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for BCRP/ABCG2 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Applicable Applications for anti-ABCG2 antibody	ELISA (Direct ELISA), FCM/FACS (Flow Cytometry), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	E Coli-derived human BCRP/ABCG2 recombinant protein (Position: M1-R378).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.

IMAGES



FCM/FACS (Flow Cytometry)

Figure 4. Flow Cytometry analysis of SiHa cells using anti-BCRP/ABCG2 antibody (AAA125549). Overlay histogram showing SiHa cells stained with AAA125549 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-BCRP/ABCG2 Antibody (AAA125549, 1µg/1x10⁶ cells) for 30 min at 20 degree C. DyLight[®]488 conjugated goat anti-rabbit IgG (5-10µg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1µg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IHC (Immunohistochemistry)

Figure 3. IHC analysis of BCRP/ABCG2 using anti-BCRP/ABCG2 antibody (AAA125549). BCRP/ABCG2 was detected in paraffin-embedded section of mouse liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2µg/ml rabbit anti-BCRP/ABCG2 Antibody (AAA125549) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 2. IHC analysis of BCRP/ABCG2 using anti-BCRP/ABCG2 antibody (AAA125549).BCRP/ABCG2 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-BCRP/ABCG2 Antibody (AAA125549) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)

Figure 1. Western blot analysis of BCRP/ABCG2 using anti-BCRP/ABCG2 antibody (AAA125549).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: human A549 whole cell lysatesLane 2: human MDA-MB-453 whole cell lysatesLane 3: human HepG2 whole cell lysatesLane 4: human Caco-2 whole cell lysatesLane 5: human PC-3 whole cell lysatesLane 6: rat liver tissue lysatesLane 7: rat kidney tissue lysatesLane 8: mouse HEPA1-6 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-BCRP/ABCG2 antigen affinity purified polyclonal antibody (Catalog # AAA125549) at 0. 5 μg/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for BCRP/ABCG2 at approximately 65-80KD. The expected band size for BCRP/ABCG2 is at 72KD.

ADDITIONAL INFORMATION

Related Product Information for anti-ABCG2 antibody	ABCG2(ATp-binding cassette, subfamily g, member 2) also known as ABCP, BCRP or MRX, is a protein that in humans is encoded by the ABCG2 gene. It is mapped on 4q22. 1. The ABCG2 gene encodes a membrane transporter belonging to the ATP-binding cassette (ABC) superfamily of membrane transporters, which are involved in the trafficking of biologic molecules across cell membranes. The ABCG2 protein is also a high capacity transporter for uric acid excretion in the kidney, liver, and gut. In vitro assays of isolated membrane preparations revealed a high-capacity, vanadate-sensitive ATPase activity associated with ABCG2 expression that was stimulated by compounds known to be transported by this protein. ABCG2 is likely functioning as a homodimer or homooligomer in this expression system since it is unlikely that putative Sf9 transport partners would be overexpressed at similarly high levels. Abcg2 transports pheophorbide-a, which occurs in various plant-derived foods and food supplements and is highly efficient in limiting its uptake from ingested food. ABCG2 is a major factor in the concentrative transfer of drugs, carcinogens, and dietary toxins to the milk of mice, cows, and humans.
References	- Jonker, J. W., Merino, G., Musters, S., van Herwaarden, A. E., Bolscher, E., Wagenaar, E., Mesman, E., Dale, T. C., Schinkel, A. H. The breast cancer resistance protein BCRP (ABCG2) concentrates drugs and carcinogenic xenotoxins into milk. Nature Med. 11: 127-129, 2005. - Matsuo, H., Takada, T., Ichida, K., Nakamura, T., Nakayama, A., Ikebuchi, Y., Ito, K., Kusanagi, Y., Chiba, T., Tadokoro, S., Takada, Y., Oikawa, Y., and 22 others. Common defects of ABCG2, a high-capacity urate exporter, cause gout: a function-based genetic analysis in a Japanese population. Sci. Transl. Med. 1: 5ra11, 2009. - Ozvegy, C., Litman, T., Szakacs, G., Nagy, Z., Bates, S., Varadi, A., Sarkadi, B. Functional characterization of the human multidrug transporter, ABCG2, expressed in insect cells. Biochem. Biophys. Res. Commun. 285: 111-117, 2001.

NCBI AND UNIPROT INFORMATION

NCBI GI #	67462103
NCBI GeneID	9429
UniProt Accession #	Q9UNQ0; O95374; Q4W5I3; Q53ZQ1; Q569L4; Q5YLG4; Q86V64; Q8IX16; Q96LD6; Q96TA8; A0A1W3; A8K1T5
Molecular Weight	72,314 Da
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

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
UniProt Protein Name	ATP-binding cassette sub-family G member 2
UniProt Gene Name	ABCG2
UniProt Synonym Gene Names	ABCP; BCRP; BCRP1; MXR
UniProt Entry Name	ABCG2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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