

ATP Binding Cassette subfamily G, member 2 (ABCG2) Antibodies

Cat. # ABCG21-P	Human ABCG2 Control/blocking peptide # 1	SIZE: 100 ug
Cat. # ABCG21-A	Rabbit Anti-Human ABCG2 IgG # 1 (aff pure)	SIZE: 100 ug

The ATP binding cassette (ABC) superfamily of membrane transporters is one of the largest protein classes known, and counts for numerous proteins involved in trafficking of biological molecules across membranes, host-defense mechanism to xenobiotics. The first known members were P-glycoprotein (P-gp) and multidrug resistant protein (MRP), cause multidrug resistance when transfected into drug-sensitive cells. In addition, increasing numbers of ABC proteins have recently been identified. The human ABCG1 (ABC, subfamily G, member 1) gene encodes a member of ABC superfamily that mediates the ATP-dependent translocation of variety of amphiphilic and lipophilic molecules. ABCG proteins were able to transport substances across cellular membranes and against concentration gradient they require an input of energy, which requires the hydrolysis of ATP, directly or indirectly.

ABCG2 (ABCG2)ATP-binding cassette sub-family G member 2 (Placenta-specific ATP- binding cassette transporter) (Breast cancer resistance protein) (Mitoxantrone resistance-associated protein) (CD338 antigen) (CDw338) protein has 655aa in human (Chr 4) and 657 in mouse, is an integral membrane protein, which plays a major role in multidrug resistance phenotype of malignant cells, when overexpressed. It appears in three different forms, containing Arg, Gly or Thr at aa position 482, these variants possess significant differences in their cross-resistance and drug transport patterns. The human ABCG2 protein shows 54% sequence homology with mouse ABCG3 protein.

Source of Antigen and Antibodies

Antigen	14-aa peptide from Human ABCG2 (gene accession # Q4W5I3, refs 1); Designation (ABCG21-P, control peptide /blocking peptide) conjugated to KLH. Epitope location ~ C-terminus, Extracellular domain
Ab Host/type	Rabbit, Polyclonal IgG, purified over antigen-agarose (Cat # ABCG21-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Supplied in **Buffer:** PBS+0.1% BSA

Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,

Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of aff pure IgG at 2-20 ug/ml.

Specificity & Cross-reactivity

Human ABCG21-P control peptide is 100% conserved in Chimp, and 85% in monkey ABCG2, and only 42% in rat and 28% in mouse ABCG2. No significant conservation of ABCG31-P is observed with other ABCGs (ABCG1, 3-8) or other proteins. Antibody cross-reactivity in various species has not been studied. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: the web site).

General References: Csilla Ozvegy et al (2002) JBC, Vol. 277, No: 50, 47980-47980; Lyn Mickley et al (2001) Mammalian Genome 12, 86-88; L. Austin Doyle (1998) PNAS Vol. 95, 15665-15670.

*This product is for In vitro research use only.

Related material available from ADI

Antibodies for ABCG1 to ABCG8.

ABCG21-A-P 70806A

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