ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

ATP Binding Cassette subfamily G, member 1 (ABCG1) Antibodies

Cat. # ABCG11-P	Mouse ABCG1 Control/blocking peptide # 1	**SIZE**: 100 ug
Cat. # ABCG11-A	**Rabbit** Anti-Mouse ABCG1 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.

ABCG1 a 678aa protein in human (chr 21q22.3), 666aa in mouse, predominantly expressed in many tissues, in the intracellular compartments mainly associated with endoplasmic reticulum and Golgi complex. It shows 26% sequence homology with ABCG2 protein. ABCG1 protein is involved in macrophage lipid homeostasis, an active member of macrophage lipid export complex.

Source of Antigen and Antibodies

Antigen	14-aa peptide from **Mouse ABCG1** (Gene Accession # Q64343) (1); **Designation (ABCG11-P, control peptide /blocking peptide**) conjugated to KLH. Epitope location ~ C-terminus, Extracellular
Ab Host/type	Rabbit, Polyclonal IgG, purified over antigen-agarose (Cat # **ABCG11**-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	# 20008-1, Mouse (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 -20^{O}C and powder at 4^{o}C or -20^{o}C..

Long-term: at –20^{0}C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20^{o}C or below.
Shipping: 4^{o}C 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

The Mouse ABCG11-P control peptide is 100% conserved in rat and 92% in human ABCG1. 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: Matthew A. Kennedy et al (2001) JBC, Vol. 276, No: 42, I39438-39447; Schmitz, G et al (2001), J. Lipid Res. 42 (10), 1513-1520; Lorkowski, S. et al (2001) Biochem. Biophys. Res Commun. 280 (1), 121-131; Venkateswaran, A et al (2000) JBC. 275 (19), 14700-14707.

*This product is for In vitro research use only.

Related material available from ADI

Antibodies for ABCG1 to ABCG8.

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