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ABCG5 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1821a

Product Information

Application	WB, IHC, FC, E
Primary Accession	Q9H222
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1B5E10
Isotype	IgG1
Calculated MW	72504
Description	The protein encoded by this gene is a member of 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. The protein encoded by this gene functions as a half-transporter to limit intestinal absorption and promote biliary excretion of sterols. It is expressed in a tissue-specific manner in the liver, colon, and intestine. This gene is tandemly arrayed on chromosome 2, in a head-to-head orientation with family member ABCG8. Mutations in this gene may contribute to sterol accumulation and atheroschlerosis, and have been observed in patients with sitosterolemia.
Immunogen	Purified recombinant fragment of human ABCG5 (AA: 306-367) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	64240
Other Names	ATP-binding cassette sub-family G member 5, Sterolin-1, ABCG5
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ABCG5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ABCG5 (HGNC:13886)
Function	ABCG5 and ABCG8 form an obligate heterodimer that mediates Mg(2+)- and ATP-dependent sterol transport across the cell membrane (PubMed:27144356). Plays an essential role in the selective transport of dietary plant sterols and cholesterol in and out of the enterocytes and in the selective sterol excretion by the liver into bile (PubMed:11099417, PubMed:11138003, PubMed:15054092, PubMed:27144356). Required for normal sterol homeostasis (PubMed:11099417, PubMed:11138003, PubMed:15054092). The heterodimer with ABCG8 has ATPase activity (PubMed:16893193, PubMed:20210363, PubMed:27144356).
Cellular Location	Cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein
Tissue Location	Strongly expressed in the liver, lower levels in the small intestine and colon.

Background

The protein encoded by this gene is a member of 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. The protein encoded by this gene functions as a half-transporter to limit intestinal absorption and promote biliary excretion of sterols. It is expressed in a tissue-specific manner in the liver, colon, and intestine. This gene is tandemly arrayed on chromosome 2, in a head-to-head orientation with family member ABCG8. Mutations in this gene may contribute to sterol accumulation and atheroschlerosis, and have been observed in patients with sitosterolemia. ; ;

References

1. PLoS One. 2012;7(5):e37972. 2. Biochemistry. 2010 Apr 27;49(16):3403-11.

Images

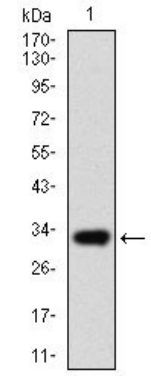

Figure 1: Western blot analysis using ABCG5 mAb against human ABCG5 recombinant protein. (Expected MW is 32.7 kDa)

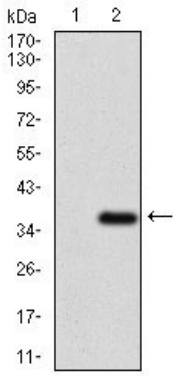

Figure 2: Western blot analysis using ABCG5 mAb against HEK293 (1) and ABCG5 (AA: 306-367)-hIgGFc transfected HEK293 (2) cell lysate.

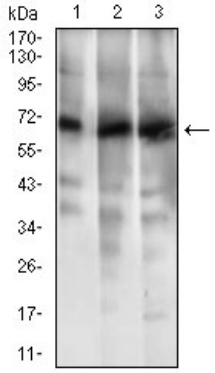

Figure 3: Western blot analysis using ABCG5 mouse mAb against HL7702 (1), RAJI (2) and Jurkat (3) cell lysate.

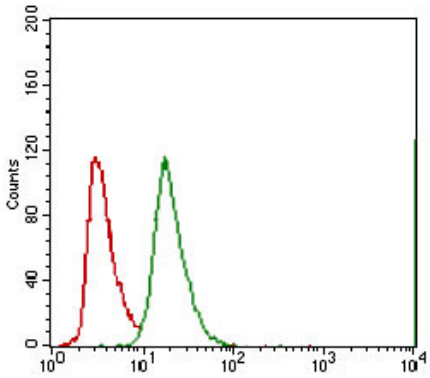

Figure 4: Flow cytometric analysis of A549 cells using ABCG5 mouse mAb (green) and negative control (red).

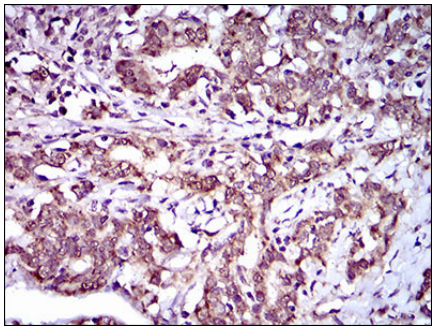

Figure 5: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using ABCG5 mouse mAb with DAB staining.

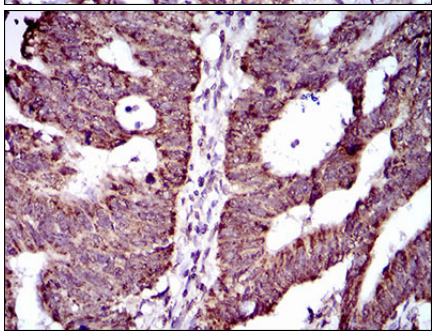

Figure 6: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using ABCG5 mouse mAb with DAB staining.