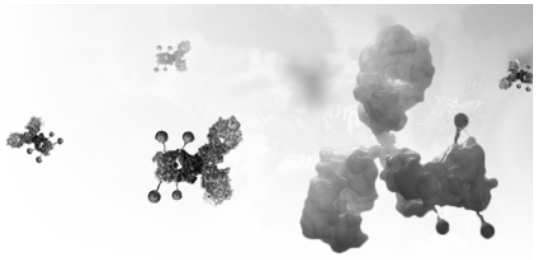

Hi-Puri™ Human Anti-Human ABCG8 Monoclonal antibody, clone 2C7 (DMAB-CDB25655)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	2C7 is a monoclonal antibody that binds the nucleotide-binding domain (NBD) of G8 and restrains the conformational changes required for ATP hydrolysis.
Specificity	Fab2C7 binds the nucleotide-binding domain (NBD) of G8.
Target	Human ABCG8
Immunogen	Recombinant human G5G8 heterodimers
Isotype	IgG
Source/Host	Human
Species Reactivity	Human
Clone	2C7
Purification	>90% determined by SDS-PAGE
Conjugate	Unconjugated
Applications	Suitable for use in IB, ELISA. Each laboratory should determine an optimum working titer for use in its particular application. Other applications have not been tested but use in such assays should not necessarily be excluded.
Format	Liquid
Concentration	lot specific

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Size	200 μg, 1 mg
Buffer	PBS (endotoxin < 1EU/mg, lower endotoxin levels may also be offered upon request)
Preservative	None
Storage	Short term at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles.
Ship	Dry ice

BACKGROUND

Introduction	The ATP-binding cassette (ABC) transporters utilize the energy from ATP hydrolysis to transport a variety of substrates across membranes and are found in all kingdoms of life. In humans, there are 48 ABC transporters divided into 7 sub-families (A–G). While all ABC transporters consist of a pair of nucleotide-binding domains (NBDs) and a pair of transmembrane domains (TMDs), the subfamily G (ABCG) members possess a unique architecture in which the NBD is N-terminal to the TMD. Among the ABCG family members, ABCG5/G8 is essential for pumping cholesterol and phytosterols outward across apical membranes of enterocytes and hepatocytes. It serves as a gatekeeper of sterol transport and acts opposite to the Niemann–Pick C1-Like protein 1 (NPC1L1). NPC1L1 facilitates sterol influx across apical membranes of enterocytes from intestinal lumen and hepatocytes from bile canaliculus in the liver, whereas ABCG5/G8 mediates efflux of the sterols in the cells to allow proper absorption of cholesterol while restricting the absorption of structurally similar phytosterols. People with loss-of-function variants of ABCG5 or ABCG8 develop sitosterolemia, an autosomal disease characterized by impaired ability to eliminate dietary sterols. Sitosterolemic patients have considerably higher plasma levels of phytosterols, which can develop tendon xanthomas, and pose a high risk of cardiovascular disease. On the other hand, gain-of-function mutation variants of ABCG5/G8 are associated with gallstone disease.
Keywords	ATP-binding cassette sub-family G member 8; ABCG8; STSL; sterolin 2; sterolin-2

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