ABCG5 Antibody / ATP-binding cassette sub-family G member 5 (FY12886)

Catalog No.	Formulation	Size
FY12886	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9H222
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml Immunofluorescence : 5ug/ml Immunoprecipitation : 2-4ug/500ug of lysate
Limitations	This ABCG5 antibody is available for research use only.

Description

ABCG5 antibody detects ATP-binding cassette sub-family G member 5, a sterol transporter that regulates cholesterol and plant sterol efflux. Encoded by the ABCG5 gene on chromosome 2p21, this half-transporter functions as a heterodimer with ABCG8 to form an ATP-dependent transporter localized to the apical membranes of enterocytes and hepatocytes. The ABCG5/ABCG8 complex limits intestinal sterol absorption and promotes biliary cholesterol excretion, maintaining systemic lipid balance.

Structurally, ABCG5 is a 651-amino-acid integral membrane glycoprotein of approximately 70 kilodaltons that contains one nucleotide-binding domain (NBD) and one transmembrane domain (TMD). It requires heterodimerization with ABCG8 for stability and activity, forming a functional exporter that utilizes ATP hydrolysis to transport sterols across lipid bilayers. ABCG5 is highly expressed in liver, small intestine, and gallbladder epithelium, where it contributes to cholesterol homeostasis and xenosterol elimination.

The ABCG5 antibody is widely used in lipid metabolism, hepatology, and cardiovascular research to study sterol

transport, bile secretion, and cholesterol regulation. Western blot analysis detects a 70 kilodalton band corresponding to ABCG5, while immunofluorescence reveals localization to apical plasma membranes of enterocytes and canalicular membranes of hepatocytes. This antibody enables detailed investigation of sterol transport mechanisms and lipid trafficking defects underlying metabolic disorders.

Loss-of-function mutations in ABCG5 cause sitosterolemia, a rare lipid disorder characterized by excessive absorption and accumulation of dietary plant sterols and premature atherosclerosis. Conversely, increased ABCG5 expression contributes to enhanced sterol efflux and protection against hypercholesterolemia. The ABCG5/ABCG8 complex is also regulated by nuclear receptors such as liver X receptor (LXR) and farnesoid X receptor (FXR), integrating lipid metabolism with transcriptional control. The ABCG5 antibody provides a high-quality reagent for monitoring transporter expression, assessing sterol efflux activity, and exploring therapeutic regulation of cholesterol metabolism. NSJ Bioreagents validates this antibody for western blotting, immunohistochemistry, and immunofluorescence, ensuring reliability for lipid transport research.

Application Notes

Optimal dilution of the ABCG5 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ABCG5 recombinant protein (Position: M1-S88) was used as the immunogen for the ABCG5 antibody.

Storage

After reconstitution, the ABCG5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.