

ABCG2 Monoclonal Antibody

Catalog No :	YM0007
Reactivity :	Human;Mouse;Monkey
Applications :	WB;IHC;IF;FCM;ELISA
Target :	ABCG2
Fields :	>>Antifolate resistance;>>ABC transporters;>>Bile secretion
Gene Name :	ABCG2
Protein Name :	ATP-binding cassette sub-family G member 2
Human Gene Id :	9429
Human Swiss Prot No :	Q9UNQ0
Mouse Gene Id :	26357
Mouse Swiss Prot No :	Q7TMS5
Immunogen :	Purified recombinant fragment of human ABCG2 expressed in E. Coli.
Specificity :	ABCG2 Monoclonal Antibody detects endogenous levels of ABCG2 protein.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Monoclonal, Mouse
Dilution :	WB 1:500 - 1:2000. IHC 1:200 - 1:1000. IF 1:200 - 1:1000. Flow cytometry: 1:200 - 1:400. ELISA: 1:10000. Not yet tested in other applications.
Purification :	Affinity purification
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)

Molecularweight : 72kD

Cell Pathway : ABC transporters;

P References :
1. Carcinogenesis. 2008 Dec;29(12):2289-97.
2. Pharm Res. 2009 Feb;26(2):449-58.

Background :

The membrane-associated protein encoded by this gene is included in 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. Alternatively referred to as a breast cancer resistance protein, this protein functions as a xenobiotic transporter which may play a major role in multi-drug resistance. It likely serves as a cellular defense mechanism in response to mitoxantrone and anthracycline exposure. Significant expression of this protein has been observed in the placenta, which may suggest a potential role for this molecule in placenta tissue. Multiple transcript variants encoding different isoforms have been found for this gene.

Function :

function:Xenobiotic transporter that may play an important role in the exclusion of xenobiotics from the brain. May be involved in brain-to-blood efflux. Appears to play a major role in the multidrug resistance phenotype of several cancer cell lines. When overexpressed, the transfected cells become resistant to mitoxantrone, daunorubicin and doxorubicin, display diminished intracellular accumulation of daunorubicin, and manifest an ATP-dependent increase in the efflux of rhodamine 123.,induction:Up-regulated in brain tumors.,PTM:Glycosylation-deficient ABCG2 is normally expressed and functional.,similarity:Belongs to the ABC transporter family. ABCG (White) subfamily.,similarity:Contains 1 ABC transmembrane type-2 domain.,similarity:Contains 1 ABC transporter domain.,subunit:Monomer or homodimer; disulfide-linked.,tissue specificity:Highly expressed in placenta. Low expression in small i

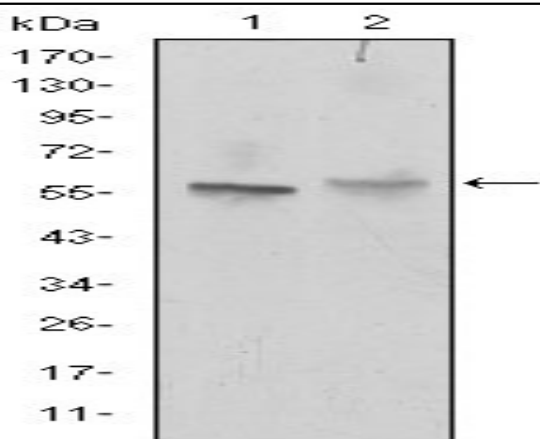
Subcellular Location :

Cell membrane ; Multi-pass membrane protein . Apical cell membrane ; Multi-pass membrane protein . Mitochondrion membrane ; Multi-pass membrane protein . Enriched in membrane lipid rafts. .

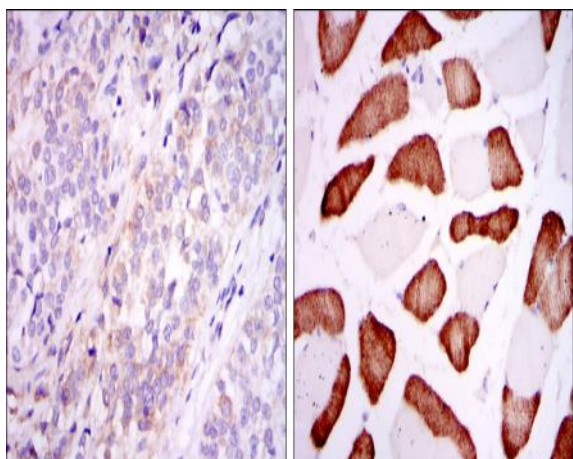
Expression :

Highly expressed in placenta (PubMed:9850061). Low expression in small intestine, liver and colon (PubMed:9861027). Expressed in brain (at protein level) (PubMed:12958161).

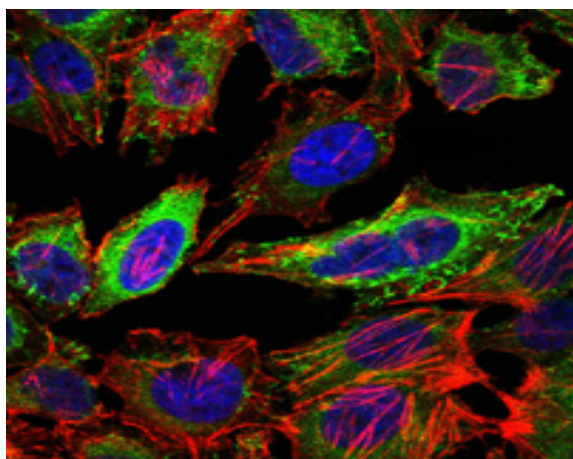
Products Images



Western Blot analysis using ABCG2 Monoclonal Antibody against NIH/3T3 (1) and Cos7 (2) cell lysate.



Immunohistochemistry analysis of paraffin-embedded bladder cancer tissues (left) and skeletal muscle tissues (right) with DAB staining using ABCG2 Monoclonal Antibody.



Immunofluorescence analysis of HeLa cells using ABCG2 Monoclonal Antibody (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

Flow cytometric analysis of HepG2 cells using ABCG2 Monoclonal Antibody (green) and negative control (purple).

