

Store at
-20°C**ABCG2 (D5V2K) XP[®] Rabbit mAb**

#42078

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Entrez-Gene ID #9429
UniProt ID #Q9UNQ0

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For Research Use Only. Not For Use In Diagnostic Procedures.
Applications
 W, IP, IHC-P
 Endogenous

Species Cross-Reactivity*
 H, M

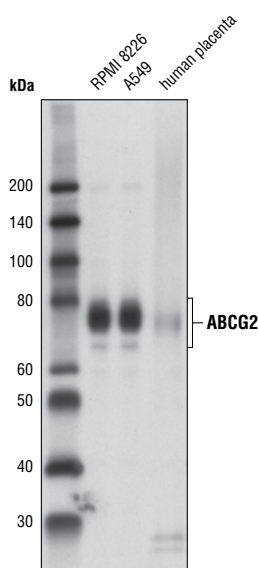
Molecular Wt.
 65-80 kDa

Isotype
 Rabbit IgG**

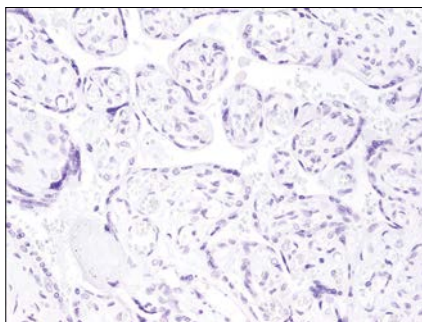
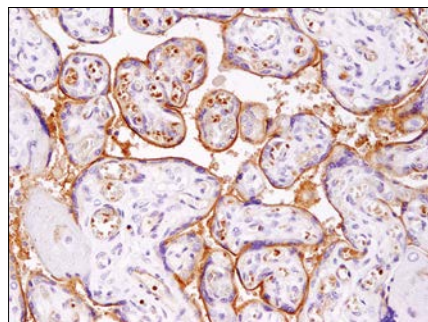
Background: ABCG2 (BCRP1/ABCP/MXR) is a member of the ATP-binding cassette transporter family that functions as ATP-dependent transporters for a wide variety of chemical compounds and are associated with drug-resistance in cancer cells (1-6). ABCG2 is a heavily glycosylated transmembrane protein with six transmembrane spanning regions, consistent with it functioning as a half-transporter. The ABC family can exist as either full-length transporters or as half-transporters that form functional transporters through homo- or heterodimerization. High expression of ABCG2 was found in placenta as well as cell lines selected for resistance to a number of chemotherapeutic drugs, including mitoxantrone, doxorubicin, topotecan and flavopiridol. In rodents, the highest expression of ABCG2 was found in kidney (8). ABCG2 expression has also been observed in stem cell populations, particularly in hematopoietic and neuronal stem cells and is downregulated with differentiation (9-12).

Specificity/Sensitivity: ABCG2 (D5V2K) XP[®] Rabbit mAb recognizes endogenous levels of total ABCG2 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp175 of human ABCG2 protein.



Western blot analysis of extracts from RPMI 8226 and A549 cells and human placenta using ABCG2 (D5V2K) XP[®] Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human placenta using ABCG2 (D5V2K) XP[®] Rabbit mAb in the presence of control peptide (left) and antigen-specific peptide (right).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

Immunoprecipitation 1:50

Immunohistochemistry (Paraffin) 1:350

 Unmasking buffer: SignalStain[®] Citrate Unmasking Solution (10X) #14746

 Antibody diluent: SignalStain[®] Antibody Diluent #8112

 Detection reagent: SignalStain[®] Boost (HRP, Rabbit) #8114

 Optimal IHC dilutions determined using SignalStain[®] Boost IHC Detection Reagent.

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

Background References:

- (1) Doyle, L.A. and Ross, D.D. (2003) *Oncogene* 22, 7340-58.
- (2) Allen, J.D. et al. (1999) *Cancer Res* 59, 4237-41.
- (3) Doyle, L.A. et al. (1998) *Proc Natl Acad Sci USA* 95, 15665-70.
- (4) Allikmets, R. et al. (1998) *Cancer Res* 58, 5337-9.
- (5) Miyake, K. et al. (1999) *Cancer Res* 59, 8-13.
- (6) Robey, R.W. et al. (2001) *Clin Cancer Res* 7, 145-52.
- (7) Zhou, S. et al. (2001) *Nat Med* 7, 1028-34.
- (8) Honscha, W. et al. (2000) *Hepatology* 31, 1296-304.
- (9) Scharenberg, C.W. et al. (2002) *Blood* 99, 507-12.
- (10) Islam, M.O. et al. (2005) *Neurosci Res* 52, 75-82.
- (11) Bunting, K.D. (2002) *Stem Cells* 20, 11-20.
- (12) Scharenberg, C.W. et al. (2002) *Blood* 99, 507-12.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween[®]20 at 4°C with gentle shaking, overnight.

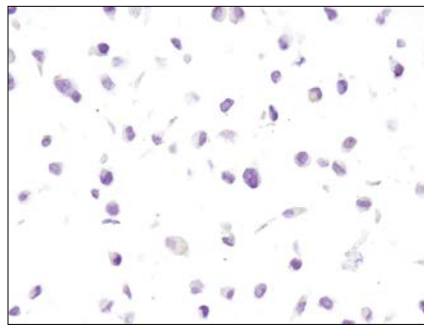
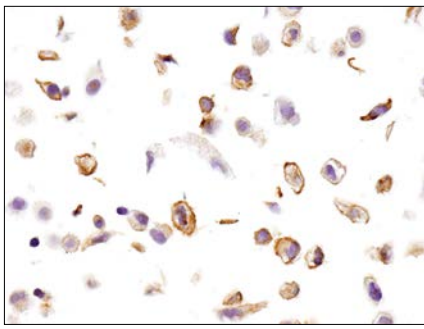
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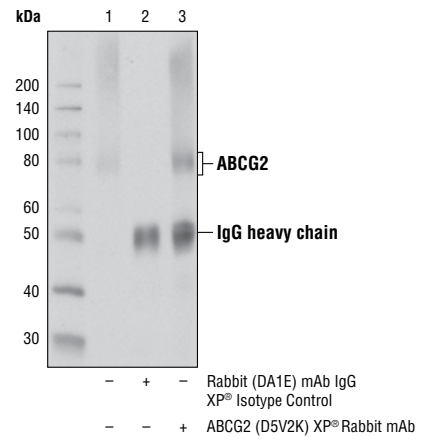
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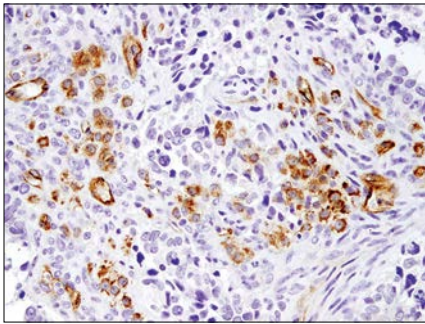
Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected **Species** enclosed in parentheses are predicted to react based on 100% homology.



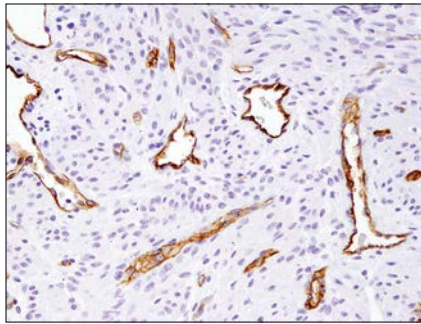
Immunohistochemical analysis of paraffin-embedded A549 (left) and A-204 (right) cell pellets using ABCG2 (D5V2K) XP[®] Rabbit mAb.



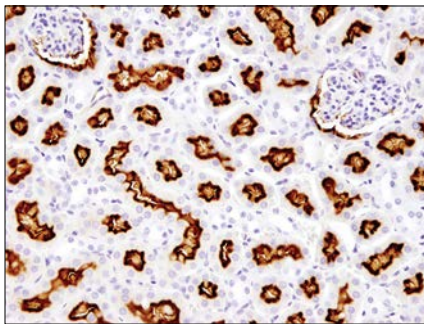
Immunoprecipitation of ABCG2 from A549 cell extracts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP[®] Isotype Control #3900, and lane 3 is ABCG2 (D5V2K) XP[®] Rabbit mAb. Western blot analysis was performed using ABCG2 (D5V2K) XP[®] Rabbit mAb.



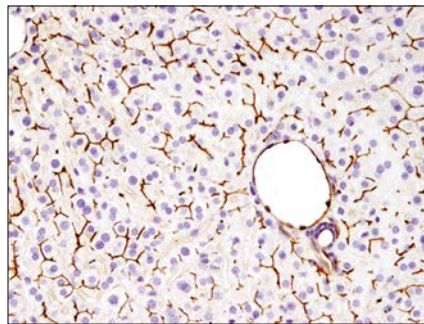
Immunohistochemical analysis of paraffin-embedded human ovarian carcinoma using ABCG2 (D5V2K) XP[®] Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded normal human uterus using ABCG2 (D5V2K) XP[®] Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded mouse kidney using ABCG2 (D5V2K) XP[®] Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded mouse liver using ABCG2 (D5V2K) XP[®] Rabbit mAb.

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