Revision 1

ABCG2 Antibody

Store at -20C

#4477

Cell Signaling TECHNOLOGY®

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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	65-80	Rabbit	#Q9UNQ0	9429

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

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

Specificity/Sensitivity

ABCG2 Antibody detects endogenous levels of total ABCG2 protein.

Species predicted to react based on 100% sequence homology

Monkey, Xenopus, Bovine, Dog

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Thr180 of human ABCG2 protein, which lies within the intracellular region of ABCG2. Antibodies were purified by protein A and peptide affinity chromatography.

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 (9-11).

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 U S A* 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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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