Revision 1

Store at -20C

#61474

ABCG2 (D5V2K) XP® Rabbit mAb (BSA and Azide Free)

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

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

Product Usage Information

This product is the carrier free version of product #42078. All data were generated using the same antibody clone in the standard formulation which contains BSA and glycerol.

This formulation is ideal for use with technologies requiring specialized or custom antibody labeling, including fluorophores, metals, lanthanides, and oligonucleotides. It is not recommended for ChIP, ChIP-seq, CUT&RUN or CUT&Tag assays. If you require a carrier free formulation for chromatin profiling, please contact us. Optimal dilutions/concentrations should be determined by the end user.

BSA and Azide Free antibodies are quality control tested by size exclusion chromatography (SEC) to determine antibody integrity.

Formulation

Supplied in 1X PBS (10 mM Na_2HPO_4, 3 mM KCl, 2 mM KH_2PO_4, and 140 mM NaCl (pH 7.8)). BSA and Azide Free.

For standard formulation of this product see product #42078

Storage

Store at -20°C. *This product will freeze at -20°C so it is recommended to aliquot into single-use vials to avoid multiple freeze/thaw cycles.* A slight precipitate may be present and can be dissolved by gently vortexing. This will not interfere with antibody performance.

Specificity/Sensitivity

ABCG2 (D5V2K) XP® Rabbit mAb (BSA and Azide Free) 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.

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).

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human **M:** Mouse

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