Revision 1

Store at -20C

#14198

MRP1/ABCC1 Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	170-220	Rabbit	#P33527	4363

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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

MRP1/ABCC Antibody recognizes endogenous levels of total MRP1 protein. This antibody does not cross-react with other MRP proteins.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gln271 of human MRP1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Multidrug resistance-associated protein 1 (MRP1/ABCC1) is a member of the MRP subfamily of ATP-binding cassette (ABC) transporters (1). MRP1/ABCC1 protein functions as an organic anion transporter. It has a broad range of substrates, including antineoplastic or therapeutic agents and the glutathione (GSH) conjugates of these compounds. MRP1/ABCC1 also transports physiological substrates such as folates, GSH and GSH disulfide (GSSG) conjugates of steroids, leukotrienes, and prostaglandins (2,3).

Although MRP1/ABCC1 is generally expressed in normal tissue, upregulation of MRP1/ABCC1 has been found in a variety of solid tumors, including small cell lung cancer, breast cancer, and prostate cancer (1,4,5). Research studies show that overexpression of MRP1/ABCC1 facilitates the elimination of therapeutic agents from cancer cells and confers drug resistance in those patients. Research studies also show that elevated expression of MRP1/ABCC1 is a negative prognostic marker for breast cancer and small cell lung cancer, as the level of MRP1/ABCC1 is predictive of the response and toxicity of chemotherapeutic agents in those patients (6-10).

Background References

1. Cole, S.P. et al. (1992) *Science* 258, 1650-4.
2. Pajic, M. et al. (2005) *Cancer Lett* 228, 241-6.
3. Deeley, R.G. and Cole, S.P. (2006) *FEBS Lett* 580, 1103-11.
4. Atalay, C. et al. (2006) *Tumour Biol* 27, 309-18.
5. Sánchez, C. et al. (2011) *Prostate* 71, 1810-7.
6. Nooter, K. et al. (1997) *Br J Cancer* 76, 486-93.
7. Hsia, T.C. et al. (2002) *Lung* 180, 173-9.
8. Kuo, T.H. et al. (2003) *Nucl Med Biol* 30, 627-32.
9. Sánchez, C. et al. (2009) *Prostate* 69, 1448-59.
10. Vulsteke, C. et al. (2013) *Ann Oncol* 24, 1513-25.

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 **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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Limited Uses

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