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#72202

## MRP1/ABCC1 (D5C1X) Rabbit mAb



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Entrez-Gene ID #4363  
UniProt ID #P33527

New 10/15

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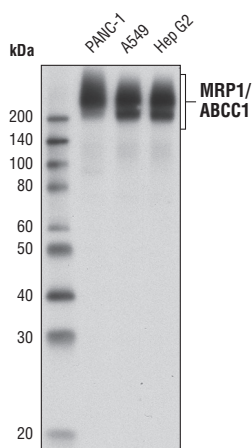
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P Endogenous	H	170-220 kDa	Rabbit IgG**

**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).

**Specificity/Sensitivity:** MRP1/ABCC1 (D5C1X) Rabbit mAb recognizes endogenous levels of total MRP1 protein. This antibody does not cross-react with MRP2 and MRP3 proteins.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val273 of human MRP1 protein.



Western blot analysis of extracts from PANC-1, A549, and Hep G2 cells using MRP1/ABCC1 (D5C1X) Rabbit mAb.

**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)	1:200†
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](http://www.cellsignal.com)

**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.

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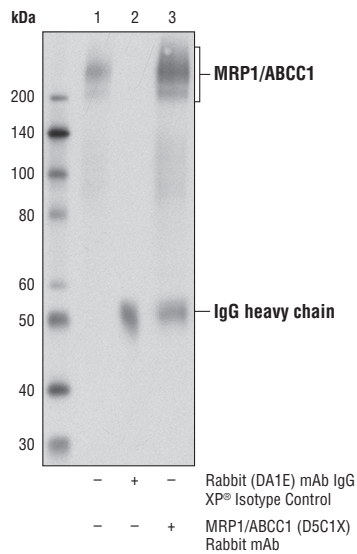
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**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.**

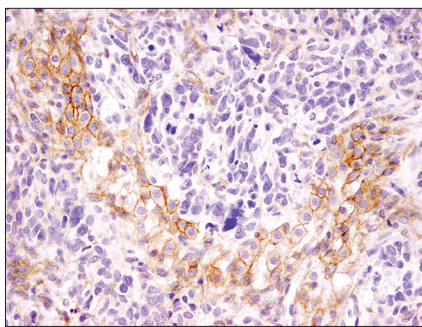
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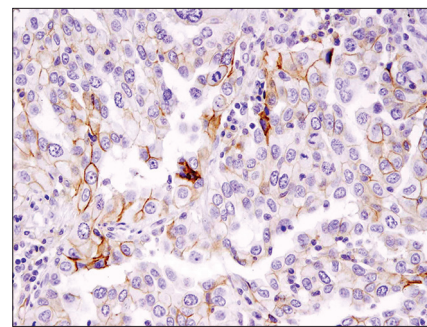
Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine 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.



Immunoprecipitation of MRP1/ABCC1 from Hep G2 cell extracts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP® Isotype Control #3900, and lane 3 is MRP1/ABCC1 (D5C1X) Rabbit mAb. Western blot analysis was performed using MRP1/ABCC1 (D5C1X) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human ovarian carcinoma using MRP1/ABCC1 (D5C1X) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma using MRP1/ABCC1 (D5C1X) Rabbit mAb.

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