

Store at  
-20°C  
**#12705**

# MRP4/ABCC4 (D2Q20) Rabbit mAb

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**Entrez-Gene ID** #10257  
**UniProt ID** #O15439

rev. 05/25/16

**For Research Use Only. Not For Use In Diagnostic Procedures.**

**Applications**  
W, IP, IF-IC, IF-F  
Endogenous

**Species Cross-Reactivity\***  
H, M, Mk

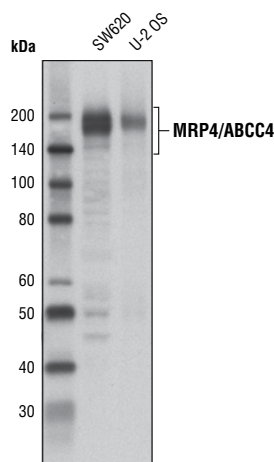
**Molecular Wt.**  
140-200 kDa

**Isotype**  
Rabbit IgG\*\*

**Background:** ABCC4 is a member of the ATP-binding Cassette (ABC) transporter family. ABC proteins transport various molecules across cellular membranes by utilizing the energy generated from ATP hydrolysis. There are seven subfamilies of ABC proteins: ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, and White (1). ABCC4 belongs to the MRP subfamily, which is involved in multi-drug resistance, hence it is also named MRP4. ABCC4 is widely expressed in tissues including prostate, kidney proximal tubules, astrocytes and capillary endothelial cells of the brain, platelets, and many cancer cell lines (2-4). ABCC4 mediates efflux transport of a wide variety of endogenous and xenobiotic organic anionic compounds (5). The diversity of substrates determines the biological functions of ABCC4. It regulates cAMP levels in human leukemia cells, thereby controlling the proliferation and differentiation of leukemia cells (6). ABCC4 also enables COX deficient pancreatic cancer cells to obtain exogenous prostaglandins (7). Research studies have shown that ABCC4 expression is elevated in drug resistant cancer cells, which makes it a potential target for cancer therapy (8,9). ABCC4 localizes to both plasma membrane and intracellular membranous structures (10). Investigators have also implicated ABCC4 in the pathogenesis of Kawasaki disease, a childhood genetic disorder characterized by vasculitis (11).

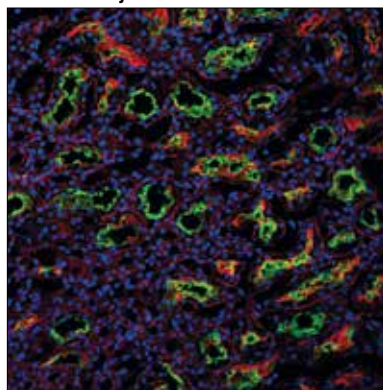
**Specificity/Sensitivity:** MRP4/ABCC4 (D2Q20) Rabbit mAb recognizes endogenous levels of total ABCC4 protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala1023 of human ABCC4 protein.



Western blot analysis of extracts from SW620 and U-2 OS cells using MRP4/ABCC4 (D2Q20) Rabbit mAb.

mouse kidney



Confocal immunofluorescent analysis of mouse kidney using MRP4/ABCC4 (D2Q20) Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

**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
Immunofluorescence (IF-IC)	1:200
Immunofluorescence (IF-F)	1:200

**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) Nakanishi, T. *Cancer Genomics Proteomics* 4, 241-54.
- (2) Kool, M. et al. (1997) *Cancer Res* 57, 3537-47.
- (3) Lee, K. et al. (1998) *Cancer Res* 58, 2741-7.
- (4) Nies, A.T. et al. (2004) *Neuroscience* 129, 349-60.
- (5) Giacomini, K.M. et al. (2010) *Nat Rev Drug Discov* 9, 215-36.
- (6) Copsel, S. et al. (2011) *J Biol Chem* 286, 6979-88.
- (7) Omura, N. et al. (2010) *Mol Cancer Res* 8, 821-32.
- (8) Bronger, H. et al. (2005) *Cancer Res* 65, 11419-28.
- (9) Hagmann, W. et al. (2009) *Pancreatology* 9, 136-44.
- (10) Rius, M. et al. (2008) *J Pharmacol Exp Ther* 324, 86-94.
- (11) Khor, C.C. et al. (2011) *J Med Genet* 48, 467-72.

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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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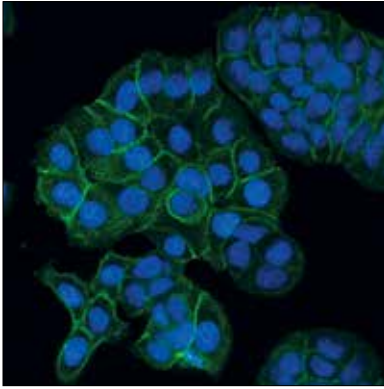
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**Applications:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink 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.

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HT-29



*Confocal immunofluorescent analysis of HT-29 cells using MRP4/ABCC4 (D2Q20) Rabbit mAb (green). Blue pseudocolor = DRAQ5<sup>®</sup> #4084 (fluorescent DNA dye).*

