

#14462 Store at -20°C

MPC1 (D2L9I) Rabbit mAb**Cell Signaling**
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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:
WB, IP	H M R Mk	Endogenous	12	Rabbit IgG	#Q9Y5U8	51660

Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:50
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. <i>Do not aliquot the antibody.</i>	
Specificity / Sensitivity	MPC1 (D2L9I) Rabbit mAb recognizes endogenous levels of total MPC1 protein. This antibody does not cross-react with MPC2 protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human MPC1 protein.	
Background	<p>The transport of the glycolytic end product pyruvate into mitochondria and the decarboxylation of pyruvate in the citric acid cycle generate energy through oxidative phosphorylation under aerobic conditions (1,2). Two inner mitochondrial membrane proteins, mitochondrial pyruvate carrier 1 (MPC1) and mitochondrial pyruvate carrier 2 (MPC2), form a 150 kDa complex and are essential proteins in the facilitated transport of pyruvate into mitochondria (1,2). Mutations in the corresponding <i>MPC1</i> gene are associated with deficient pyruvate transport and may result in lactic acidosis, developmental delay, and premature death (2,3). Altered MPC1/MPC2 expression or activity may result in significant metabolic disorders and contribute to the increase in aerobic glycolysis in cancer cells (a.k.a., the Warburg effect) (4).</p>	
Background References	1. Herzig, S. et al. (2012) <i>Science</i> 337, 93-6. 2. Bricker, D.K. et al. (2012) <i>Science</i> 337, 96-100. 3. Brivet, M. et al. (2003) <i>Mol Genet Metab</i> 78, 186-92. 4. Gray, L.R. et al. (2014) <i>Cell Mol Life Sci</i> 71, 2577-604.	
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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.	
Applications Key	WB: Western Blotting IP: Immunoprecipitation	
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus 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 GP: Guinea Pig Rab: rabbit All: all species expected	
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