

HMGCS2 (D8B5M) Rabbit mAb

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

Applications: W	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 50	Source/Isotype: Rabbit IgG	UniProt ID: #P54868	Entrez-Gene Id: 3158
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Product Usage Information	Application Western Blotting	Dilution 1:1000
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.	
Specificity/Sensitivity	HMGC2 (D8B5M) Rabbit mAb recognizes endogenous levels of total HMGC2 protein. This antibody does not cross-react with HMGC1 protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala45 of human HMGC2 protein.	
Background	Mitochondrial 3-hydroxy-3-methylglutaryl-CoA synthase (HMGC2) generates hydroxymethylglutaryl-CoA (HMG-CoA) from acetyl-CoA and acetoacetyl-CoA, a rate-limiting step in ketogenesis (1). Starvation or a high-fat and low-carbohydrate diet increases the levels of hepatic FGF21, which in turn up-regulates HMGC2 expression (2). Furthermore, mTORC1 inhibition was shown to be required for the increase of HMGC2 expression mediated by PPARα in response to fasting (3). In addition, studies on mice lacking HMGC2 suggest that ketogenesis plays a role in the prevention of diet-induced fatty liver injury and hyperglycemia (4).	
Background References	<ol style="list-style-type: none"> 1. Puchalska, P. and Crawford, P.A. (2017) <i>Cell Metab</i> 25, 262-284. 2. Badman, M.K. et al. (2007) <i>Cell Metab</i> 5, 426-37. 3. Sengupta, S. et al. (2010) <i>Nature</i> 468, 1100-4. 4. Cotter, D.G. et al. (2014) <i>J Clin Invest</i> 124, 5175-90. 	
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	W: Western Blotting	
Cross-Reactivity Key	H: Human M: Mouse R: Rat	
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