

PCK1 (D12F5) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	63	Rabbit IgG	#P35558	5105

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

PCK1 (D12F5) Rabbit mAb recognizes endogenous levels of total PCK1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human PCK1 protein.

Background

Phosphoenolpyruvate carboxykinase 1 (PCK1, PEPCK1 or PEPCK-C) is a cytosolic enzyme responsible for the conversion of oxaloacetate to phosphoenolpyruvate (1). PCK1 is involved in controlling the rate-limiting step of gluconeogenesis in the liver, which generates glucose from non-carbohydrate substrates such as lactate and glycerol (2). The deacetylase SirT1 stimulates transcription of PCK1 and glucose-6-phosphatase to activate gluconeogenesis (3). Depending on nutritional state, Stat3 can inhibit PCK1 and glucose-6-phosphatase expression and suppress gluconeogenesis (4). Relatively high glucose concentration can result in acetylation of PCK1 by P300 acetyltransferase, promoting an interaction between PCK1 and the E3 ligase UBR5 that leads to the PCK1 destabilization (5).

Background References

1. Caton, P.W. et al. (2009) *Life Sci* 84, 738-44.
2. Yoon, J.C. et al. (2001) *Nature* 413, 131-8.
3. Rodgers, J.T. et al. (2005) *Nature* 434, 113-8.
4. Nie, Y. et al. (2009) *Nat Cell Biol* 11, 492-500.
5. Jiang, W. et al. (2011) *Mol Cell* 43, 33-44.

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 **Mk:** Monkey

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