

#3820 Store at -20C

PDHK1 (C47H1) Rabbit mAb**Cell Signaling**
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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	47	Rabbit IgG	#Q15118	5163

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. Do not aliquot the antibody.

Specificity / Sensitivity

PDHK1 (C47H1) Rabbit mAb detects endogenous levels of total PDHK1 protein.

Species predicted to react based on 100% sequence homology:

Bovine

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human PDHK1 protein.

Background

Pyruvate generated from glycolysis is converted to acetyl-CoA by pyruvate dehydrogenase (PDH) under normoxia (1-3). This is a critical link between glycolysis and the TCA cycle (3). PDH activity is regulated by phosphorylation and dephosphorylation (3). Pyruvate dehydrogenase kinase (PDHK) phosphorylates PDH and inactivates it, whereas dephosphorylation of PDH is carried out by pyruvate dehydrogenase phosphatase to generate the active form (3). Hypoxia can directly induce pyruvate dehydrogenase kinase 1 (PDHK1) expression, which results in inactivation of PDH and the TCA cycle and subsequent suppression of metabolism (4).

Background References

1. Harris, R.A. et al. (2002) *Adv Enzyme Regul* 42, 249-59.
2. Fries, M. et al. (2003) *Biochemistry* 42, 6996-7002.
3. Wigfield, S.M. et al. (2008) *Br J Cancer* 98, 1975-84.
4. Kim, J.W. et al. (2006) *Cell Metab* 3, 177-85.

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 BSA, 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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