

PDHK1(Phospho-Thr338) Antibody

Catalog No: #11596

Package Size: #11596-1 50ul #11596-2 100ul

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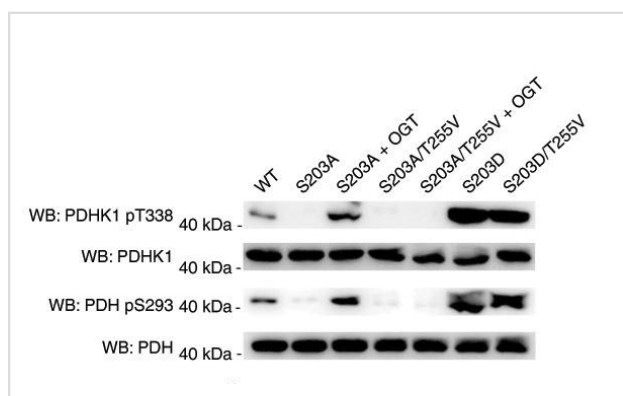
Description

Product Name	PDHK1(Phospho-Thr338) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatography using non-phosphopeptide.
Applications	WB
Species Reactivity	Hu Ms Rt
Specificity	The antibody detects endogenous level of PDHK1 only when phosphorylated at threonine 338.
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around phosphorylation site of threonine 338(Y-S-T(p)-A-P) derived from Human PDHK1.
Target Name	PDHK1
Modification	Phospho
Other Names	PDK1; PDH kinase 1
Accession No.	Swiss-Prot: Q15118NCBI Protein: NP_001265478.1
Target Species	Human
Calculated MW	49kd
Concentration	1.0mg/mL
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C for long term preservation (recommended). Store at 4°C for short term use.

Application Details

Western blotting: 1:500~1:1000

Images



Immunoblotting analysis of PDHK1 and PDH phosphorylation in mitochondria. Mitochondrial fractions were prepared and immunoblotted with indicated antibodies

Background

Kinase that plays a key role in regulation of glucose and fatty acid metabolism and homeostasis via phosphorylation of the pyruvate dehydrogenase subunits PDHA1 and PDHA2. This inhibits pyruvate dehydrogenase activity, and thereby regulates metabolite flux through the tricarboxylic acid cycle, down-regulates aerobic respiration and inhibits the formation of acetyl-coenzyme A from pyruvate. Plays an important role in cellular responses to hypoxia and is important for cell proliferation under hypoxia. Protects cells against apoptosis in response to hypoxia and oxidative stress.

Gudi R., Bowker-Kinley M.M., Kedishvili N.Y., Zhao Y., Popov K.M.J. Biol. Chem. 270:28989-28994(1995)

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Published Papers

el at., Inhibition of phosphoglycerate kinase 1 attenuates autoimmune myocarditis by reprogramming CD4+ T cell metabolism In Cardiovasc Res On 2023 Jun 13 by Yang Lu, Ning Zhao et al. PMID: 36726197, (2023)

[PMID:36726197](#)

el at., Integrative proteogenomic characterization of early esophageal cancer In Nat Commun On 2023 Mar 25 by Lingling Li, Dongxian Jiang et al. PMID: 36966136, (2023)

[PMID:36966136](#)

el at., Identification of a novel non-ATP-competitive protein kinase inhibitor of PGK1 from marine nature products. In Biochem Pharmacol on 2021 Jan by Yuying Wang, Lulu Sun, et al. PMID: 33212041, (2021)

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el at., Suppression of Pyruvate Dehydrogenase Kinase by Dichloroacetate in Cancer and Skeletal Muscle Cells Is Isoform Specific and Partially Independent of HIF-1 α . In Int J Mol Sci on 2021 Aug 10 by Nives θ $\text{\textcircled{C}}$ korja Mili θ $^{\circ}$, Klemen Dolinar, et al. PMID: 34445316, (2021)

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el at., O-GlcNAcylation of PGK1 coordinates glycolysis and TCA cycle to promote tumor growth. In Nat Commun on 2020 Jan 7; by Nie H, Ju H, et al. PMID: 31911580, (2020)

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el at., Associations of PGK1 promoter hypomethylation and PGK1-mediated PDHK1 phosphorylation with cancer stage and prognosis: a TCGA pan-cancer analysis. In Cancer Commun (Lond) on 2019 Oct 2 by Shao F, Yang X, et al. PMID: 31578148, (2019)

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Li X, et al. el at., Mitochondria-Translocated PGK1 Functions as a Protein Kinase to Coordinate Glycolysis and the TCA Cycle in Tumorigenesis., Mol Cell., 3;61(5):705-19.(2016 Mar)

[PMID:26942675](#)

Note: This product is for in vitro research use only and is not intended for use in humans or animals.