

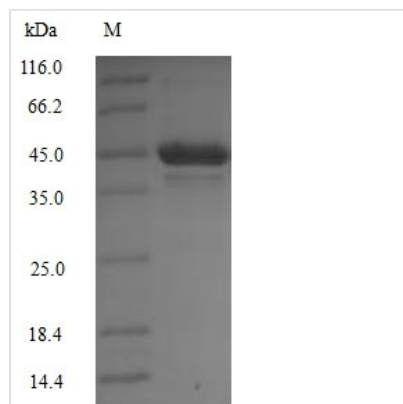


Recombinant Mouse [Pyruvate dehydrogenase (acetyl-transferring)] kinase isozyme 1, mitochondrial (Pdk1)

Product Code	CSB-BP807321MO
Relevance	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
Abbreviation	Recombinant Mouse Pdk1 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q8BFP9
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	ASASASGSGPASELGVPQGQVDFYARFSPSPLSMKQFLDFGSVNACEKTSFMFLRQELPVRLANIMKEISLLPDNLLRTPSVQLVQSWYIQSLQELLDFKDKSAEDAKTIYEFTDTVIRIRNRHNDVIPTMAQGVTEYKESFGVDPVTSQNVQYFLDRFYMSRISIRMLLNQHSLLFGGKGSPSHRKHIGSINPNCDDVEVIKDGyenARRLCDLYYVNSPELELEELNAKSPGQTIQVVYVPSHLYHMFELFKNAMRATMEHHADKGVYPPPIQVHVTLGEEDLTVKMSDRGGGVPLRKIDRLFNMYSTAPRPRVETSRVAVPLAGFGYGLPISRLYAQYFQGDCLKLYSLEGYGTDAVIYIKALSTESVERLPVYNKAAWKHYKANHEADDWCVPSPREPKDMTTFRSS
Research Area	Signal Transduction
Source	Baculovirus
Target Names	Pdk1
Protein Names	Pyruvate dehydrogenase kinase isoform 1
Expression Region	27-434aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged



Mol. Weight	48.7kDa
Protein Length	Full Length of Mature Protein

Image


(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The expression region of this recombinant Mouse Pdk1 covers amino acids 27-434. The theoretical molecular weight of the Pdk1 protein is 48.7 kDa. This Pdk1 recombinant protein is manufactured in baculovirus. The N-terminal 10xHis tag was fused into the coding gene segment of Pdk1, making it easier to detect and purify the Pdk1 recombinant protein in the later stages of expression and purification.

Pyruvate dehydrogenase kinase isoform 1 (Pdk1) is a highly studied protein, with a primary focus on metabolic regulation and the field of tumor biology. As a critical regulator of the tricarboxylic acid cycle, Pdk1 influences cellular energy metabolism by inhibiting decarboxylase activity through phosphorylation. One of its most crucial research directions is its role in tumor metabolism regulation. Pdk1 is found to be overexpressed in various cancers, closely linked to tumor growth and metabolic reprogramming. Additionally, Pdk1 is implicated in multiple research areas, including cardiovascular diseases, as its regulation of metabolic pathways and signaling networks positions it as a potential drug target for the treatment and prevention of related diseases.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.