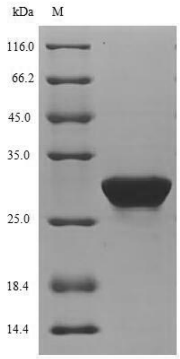
Recombinant Mouse [Pyruvate dehydrogenase [lipoamide]] kinase isozyme 4,mitochondrial (Pdk4), partial

Product Code	CSB-EP017730MO
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. Inhibition of pyruvate dehydrogenase decreases glucose utilization and increases fat metabolism in response to prolonged fasting and starvation. Plays an important role in maintaining normal blood glucose levels under starvation, and is involved in the insulin signaling cascade. Via its regulation of pyruvate dehydrogenase activity, plays an important role in maintaining normal blood pH and in preventing the accumulation of ketone bodies under starvation. In the fed state, mediates cellular responses to glucose levels and to a high-fat diet. Regulates both fatty acid oxidation and de novo fatty acid biosynthesis. Plays a role in the generation of reactive oxygen species. Protects detached epithelial cells against anoikis. Plays a role in cell proliferation via its role in regulating carbohydrate and fatty acid metabolism
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.	O70571
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	ILEYKDTCTVDPVTNQNLQYFLDRFYMNRISTRMLMNQHILIFSDSKTGNPSHI GSIDPNCDVVAVVQDAFECAKMLCDQYYLTSPELNLTQVNGKFPGQPIHIVYV PSHLHHMLFELFKNAMRATVEHQENRPSLTPVEATVVLGKEDLTIKISDRGGG VPLRITDRLFSYTYSTAPTPVMDNSRNAPLAGFGYGLPISRLYAKYFQGDLNLY SMSGYGTDAIIYLKALS
Lead Time	3-7 business days
Research Area	Metabolism
Source	E.coli
Gene Names	Pdk4
Protein Names	Pyruvate dehydrogenase kinase isoform 4
Expression Region	138-368aa

Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	30.0 kDa
Protein Description	Partial

Image



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

Description

Our Recombinant Mouse Pdk4 protein is expertly designed for researchers studying metabolism in mouse models. This protein features the pyruvate dehydrogenase (acetyl-transferring) kinase isozyme 4, a mitochondrial enzyme crucial for the regulation of the pyruvate dehydrogenase complex activity. The offered protein focuses on a partial region of Pdk4 with an expression range of 138-368aa, ensuring optimal functionality and consistency in your research endeavors.

Produced in an E. coli expression system, our Mouse Pdk4 protein is fused with an N-terminal 6xHis tag, facilitating efficient purification and detection procedures. With a purity greater than 85% as determined by SDS-PAGE, our recombinant protein is available in both liquid and lyophilized powder forms, accommodating various experimental needs. Trust our precision-engineered Recombinant Mouse Pdk4 to deliver consistent and reliable results for your metabolism research projects.

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.