



Recombinant Protein Technical Manual

Recombinant Human PDK Protein (His Tag)

RPES2941

Product Data:

Product SKU: RPES2941

Size: 20µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: NP_002601.1

Protein Information:

Molecular Mass: 48.6 kDa

AP Molecular Mass: 45 kDa

Tag: N-His

Bio-activity:

Purity: > 90 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.5, 10% glycerol

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: PDK1

Immunogen Information:

Sequence: Ser 29-Ala 436

Background:

Pyruvate dehydrogenase kinase, isozyme 1, also known as [Pyruvate dehydrogenase [lipoamide]] kinase isozyme 1, mitochondrial and PDK1, is a member of the PDK / BCKDK protein kinase family. PDK is expressed predominantly in the heart. It contains one histidine kinase domain. Pyruvate dehydrogenase kinase (PDK) isoforms are molecular switches that downregulate the pyruvate dehydrogenase complex (PDC) by reversible phosphorylation in mitochondria. An inhibitory effect of lipoic acid on PDKs would result in less phosphorylation of E1 and hence increased PDC activity. At least two isoenzymic forms of pyruvate dehydrogenase kinase (PDK and PDK-2) may be involved in the regulation of enzymatic activity of mammalian pyruvate dehydrogenase complex by phosphorylation. PDK-3 appears to have the highest specific activity among the three isoenzymes. PDK inhibits the mitochondrial pyruvate dehydrogenase complex by phosphorylation of the E1 alpha subunit, thus contributing to the regulation of glucose metabolism.