

Pyridoxal kinase

Cat. No. CBCRY19 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Source	E.coli
Background	Pyridoxal kinase, a member of the ribokinase superfamily, catalyzes the ATP-dependent phosphorylation reaction of vitamin B6 and is an essential enzyme in the formation of pyridoxal-5"-phosphate, a key cofactor for over 100 enzymes. Pyridoxal kinase is thus regarded as a potential target for pharmacological agents. Structure comparison reveals that the key 12-residue peptide over the active site in HPLK is a beta-strand/loop/beta-strand flap, while the corresponding peptide in sheep brain enzyme adopts a loop conformation. Moreover, HPLK possesses a more hydrophobic ATP-binding pocket.
Protein Classification	Transferase
Structure Weight	74135.20 Da
Polymer	1
Molecule	Pyridoxal kinase
Chain Length	327 amino acids
PDB ID	2F7K

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MMDB ID	39840
Method	X-Ray Diffraction
Resolution	2.8Å
Reference	Cao, P., Gong, Y., Tang, L., Leung, Y.C., Jiang, T.(2006) Crystal structure of human pyridoxal kinaseJ.Struct.Biol.154: 327-332
GENE INFORMATION	
Gene Name	PDXK
Synonyms	C21orf124; C21orf97; EC 2.7.1.35; DKFZp566A071; FLJ31940; FLJ37311; FLJ21324; MGC15873; MGC31754; MGC52346; PKH; PNK; PRED79; pyridoxal kinase; pyridoxamine kinase; pyridoxine kinase; vitamin B6 kinase; chromosome 21 open reading reame 124; chromosome 21 open reading frame 97
UniProt ID	O00764
Gene ID	8566
Chromosome Location	21q22.3
Function	ATP binding; lithium ion binding; magnesium ion binding; nucleotide binding; potassium ion binding; protein homodimerization activity; pyridoxal kinase activity; sodium ion binding; transferase activity; zinc ion binding