TPK1 Protein, Human (HEK293, His)

Cat. No.:	HY-P71376
Synonyms:	Thiamin pyrophosphokinase 1; hTPK1; Placental protein 20; PP20; Thiamine pyrophosphokinase 1; TPK1
Species:	Human
Source:	HEK293
Accession:	AAH68460.1 (M1-S243)
Gene ID:	27010
Molecular Weight:	Approximately 30.0 kDa

PROPERTIES

AA Sequence	M E H A F T P L E P L L S T G N L K Y C L V I L N Q P L D N Y F R H L W N K A L L R A C A D G G A N R L Y D I T E G E R E S F L P E F I N G D F D S I R P E V R E Y Y A T K G C E L I S T P D Q D H T D F T K C L K M L Q K K I E E K D L K V D V I V T L G G L A G R F D Q I M A S V N T L F Q A T H I T P F P I I I I Q E E S L I Y L L Q P G K H R L H V D T G M E G D W C G L I P V G Q P C S Q V T T T G L K W N L T N D V L A F G T L V S T S N T Y D G S G V V T V E T D H P L L W T M A I K S
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	Thiamin pyrophosphokinase 1 (TPK1) functions as a homodimer and catalyzes the conversion of thiamine (Vitamin B1) to thiamine pyrophosphate (TDP), a cofactor for some enzymes of the glycolytic and energy production pathways. TDP serves as a transient intermediate carrier of the aldehyde group in the reactions of TDP-dependent enzymes such as pyruvate dehydrogenase, 2-oxoglutarate dehydrogenase, transketolase, and others. TPK1 can also catalyze the phosphorylation of pyrithiamine to pyrithiamine pyrophosphate. Defects in TPK1 gene are a cause of thiamine metabolism dysfunction syndrome-5[1].

Caution: Product has not been fully validated for medical applications. For research use only.

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