

Polyphosphate glucokinase / ppgK - Purified

Catalog No.:	PA1267XC
Quantity:	2500
Background:	Polyphosphate Glucokinase catalyzes the phosphorylation of glucose using either inorganic polyphosphate or ATP as the phosphoryl donor. The phosphorylation of glucose plays a significant role in the creation of intermediates for oligosaccharide synthesis
Uniprot ID:	D7GI59
NCBI:	YP_003687229.1
GeneID:	9282160
Source:	<i>P. shermanii</i> , <i>Propionibacterium shermanii</i>
Format:	State: Sterile filtered white lyophilized (freeze-dried) powder. Buffer System: Contains 100 mM potassium phosphate, pH 6.8, and 25 mM sodium polyphosphate (Graham's salt) Reconstitution: Reconstitute the lyophilized PPGK in 1-10 ml deionized water.
Description:	Polyphosphate Glucokinase purified circa 100 fold. Free of all polyphosphate kinase activity. Isoelectric point = 5.8. Biological Activity: The specific activity is 3.6 U/mg. Unit definition: 1 Unit of activity = the amount of PPGK required to convert 1 μ mol glucose to glucose-6 phosphate per minute at 30°C and pH 7.4, in phosphate buffer using polyphosphate as phosphate donor. Specific Activity: 10-40 U/mg Molecular weight: 63 kDa Native MW = 63 kDa, subunit MW = 30kD
Storage:	One year from despatch when stored at -20°C, three weeks at room temperature. Please avoid freeze-thaw cycles.
General Readings:	<ol style="list-style-type: none">1. Polyphosphate glucokinase. <i>Prog Mol Subcell Biol</i> 1999;23:101-252. Hsieh PC, Kowalczyk TH, Phillips NF. Kinetic mechanisms of polyphosphate glucokinase from <i>Mycobacterium tuberculosis</i>. <i>Biochemistry</i>. 1996 Jul 30;35(30):9772-81. PubMed PMID: 8703950.3. Kowalczyk TH, Horn PJ, Pan WH, Phillips NF. Initial rate and equilibrium isotope exchange studies on the ATP-dependent activity of polyphosphate Glucokinase from <i>Propionibacterium shermanii</i>. <i>Biochemistry</i>. 1996 May 28;35(21):6777-85. PubMed PMID: 8639629.4. Hsieh PC, Shenoy BC, Samols D, Phillips NF. Cloning, expression, and characterization of polyphosphate glucokinase from <i>Mycobacterium tuberculosis</i>. <i>J Biol Chem</i>. 1996 Mar 1;271(9):4909-15. PubMed PMID: 8617763.5. Kowalczyk TH, Phillips NF. Determination of endopolyphosphatase using polyphosphate glucokinase. <i>Anal Biochem</i>. 1993 Jul;212(1):194-205. PubMed PMID: 8396361.

6. Kowalczyk TH, Szymona O. Glucose determination using immobilized polyphosphate glucokinase. Anal Biochem. 1991 Sep 2;197(2):326-32. PubMed PMID: 1664665.